



# **Installation & Operating Instructions**

## **for**

# **ACTWinSmart**

This manual refers to the ACTWinSmart software, ACTsmart control unit and ACTsmart reader/keypads.

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# 1. System Installation

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The ACTsmart2 readers/keypads can be configured in **standalone**, **master-slave** or **network** modes.

ACTsmart2 reader/keypads	
ACT Product code	Description
ACTsmart2 1070	Proximity reader only
ACTsmart2 1070pm	Proximity panel mount reader
ACTsmart2 1080	PIN and Proximity reader
ACTsmart2 1090	PIN only keypad

## Standalone Mode:

In **standalone** mode all programming is performed at the reader/keypad.

## Master-Slave Mode:

The ACTsmart2 reader/keypads can be left as standalone mode or they can be wired on an RS485 bus to a maximum of 8 keypads in **master-slave** mode. A single ACTsmart2 1080 or 1090 keypad is assigned as the master keypad and the remaining reader/keypads are slaves. Master-slave mode offers convenience for the operator when programming the readers as all programming is performed at the master keypad.

*In **Standalone** or **Master-slave** mode each reader/Keypad is located at the door where all door input and outputs are wired. The readers/keypads contain all the configuration information and the decision to authenticate a user and grant access is made at the reader/keypad.*

## Network Mode:

In **network mode** the system is extended to maximum of 16 readers on the RS485 bus. Network mode requires using the ACTsmart controller to interface between the network of readers and the PC running ACTWinSmart software. All programming is performed using the ACTWinSmart software. The software offers additional functionality to the standalone or master-slave modes such as time zones, user groups, timed actions and holidays.

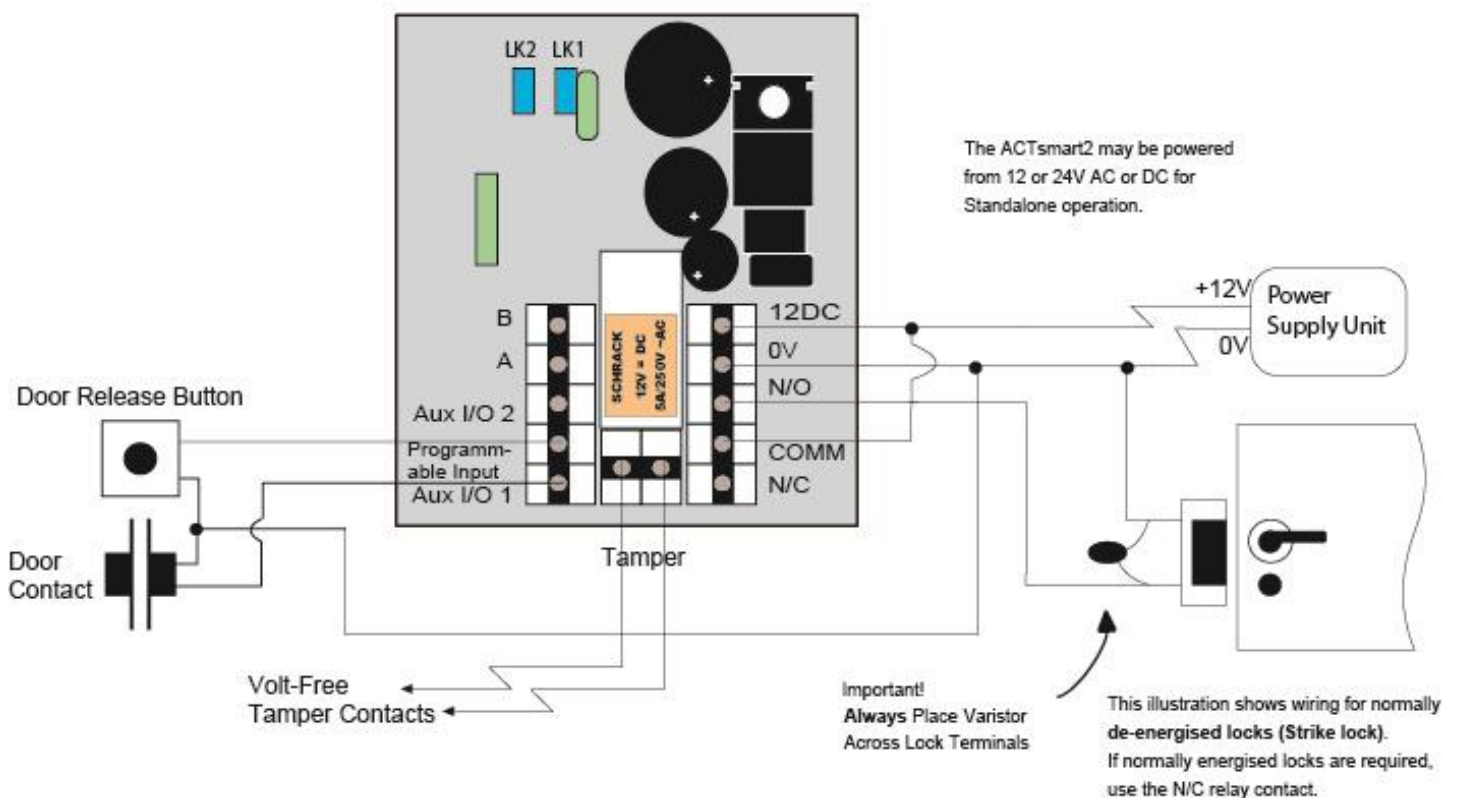
## 1.1 Standalone Mode

The installation of the ACTsmart2 reader/keypad is similar regardless of the mode of operation (standalone, master-slave or networked)

In **Standalone** mode configuration is performed at the ACTsmart2 reader/keypad.

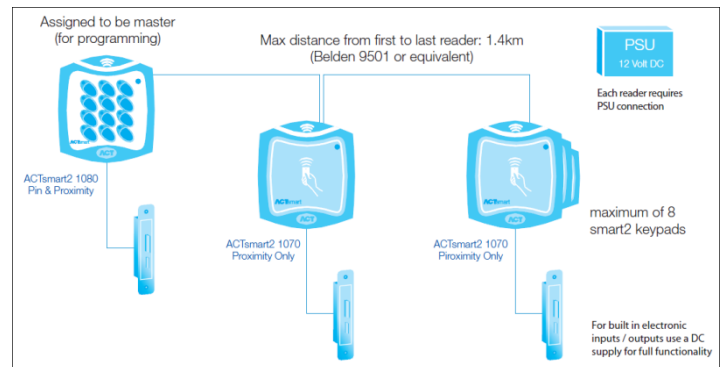
For detailed instruction on how to install and configure the ACTsmart2 keypads in standalone mode download the full **ACTsmart2 Operating and Installation instructions** from <http://www.accesscontrol.ie>

### ACTsmart2 Keypad - Installation Diagram



## 1.2 Master slave Mode

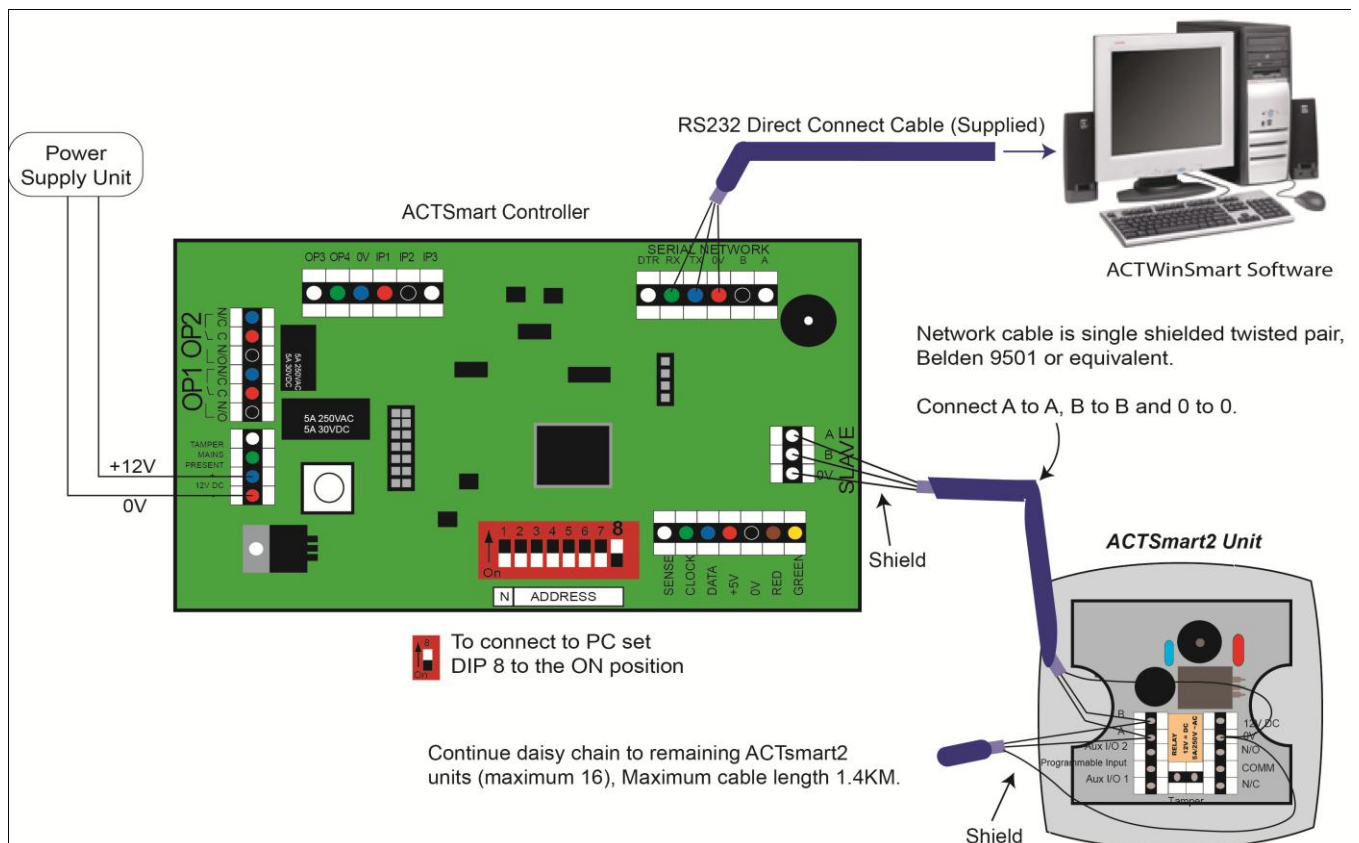
In **Master slave** mode up to a maximum of 8 ACTsmart2 readers/keypads are networked together and programmed from a single keypad assigned as the master. Use either ACTsmart2 1080 (Pin and Prox) or ACTsmart2 1090 (Pin only) keypads as the master.



Each keypad is cabled as a standalone keypad.

## 1.3 Network mode

In **Network** mode a maximum of 16 ACTsmart2 readers/keypads are connected to the ACTsmart controller. ACTWinSmart software is used to configure and manage the system of readers.





## 2. Quick setup guide

---

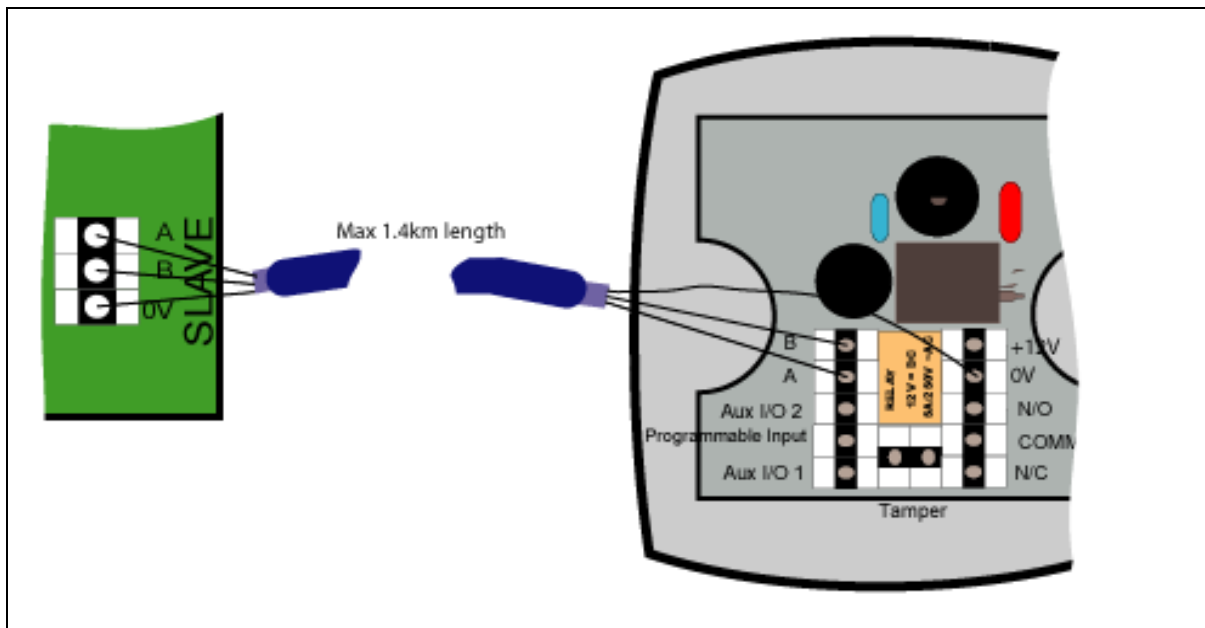
The following steps outline a procedure to connect and configure an access control system,

### **2.1 *Install and configure the ACTsmart controller:***

1. Mount the ACTsmart Controller beside the PC and connect to the serial port (RS232) on the PC. A 3 meter PC cable is provided and can be extended if required using Belden 9501 or equivalent.
2. Default the ACTsmart Controller
  - a. Remove power from the ACTsmart controller
  - b. Set ALL dipswitches to the OFF position (Down).
  - c. Apply 12V DC power to the controller
  - d. Set dipswitch 8 (Right most) to the on position (Up)

## 2.2 Install and configure the ACTsmart2 keypads

1. Install the ACTsmart2 readers/keypads. Up to 16 readers/keypads may be connected on the RS485 bus up to a maximum distance of 1.4km from the controller to the last ACTsmart2 reader. The readers must be daisy chained. Star configuration not permitted on an RS485 bus, (see ACTsmart2 Network Installation Diagram in Section 11).
2. Connect the network cable (Belden 9501 or equivalent) from the SLAVE terminals A, B and 0V to the A, B and 0V on first ACTsmart2 reader (connected shield to 0V).



3. Connect +12V to the ACTsmart2 readers and power up.
4. Default all ACTsmart2 readers. (ACTsmart2 1080 and 1090)
 

**Note:** If the ACTsmart2 readers are new and never been programmed you may skip this step

  - a. Remove the readers from controller by removing the connector block from the pins labelled Slave.
  - b. Enter Programming code (Default code 9999) at the keypad followed by 80 followed by ✓. (“X 9999 80 ✓”, Note X clears the keyboard or exits programming mode)

**See section 10.1 for details on defaulting all ACTsmart2 reader/keypads.**

## 2.3 Install and run ACTWinSmart Software

1. Install the ACTWinSmart software by following the on screen instructions.
2. Run ACTWinSmart Software.

ACTWinSmart can be run from the desktop by icon on the desktop  
or

**Start->All Program ->Access Control Software->ACTsmart->ACTWinSmart.exe**

Default <b>Installer</b> password	9999
Default <b>User</b> password	1234

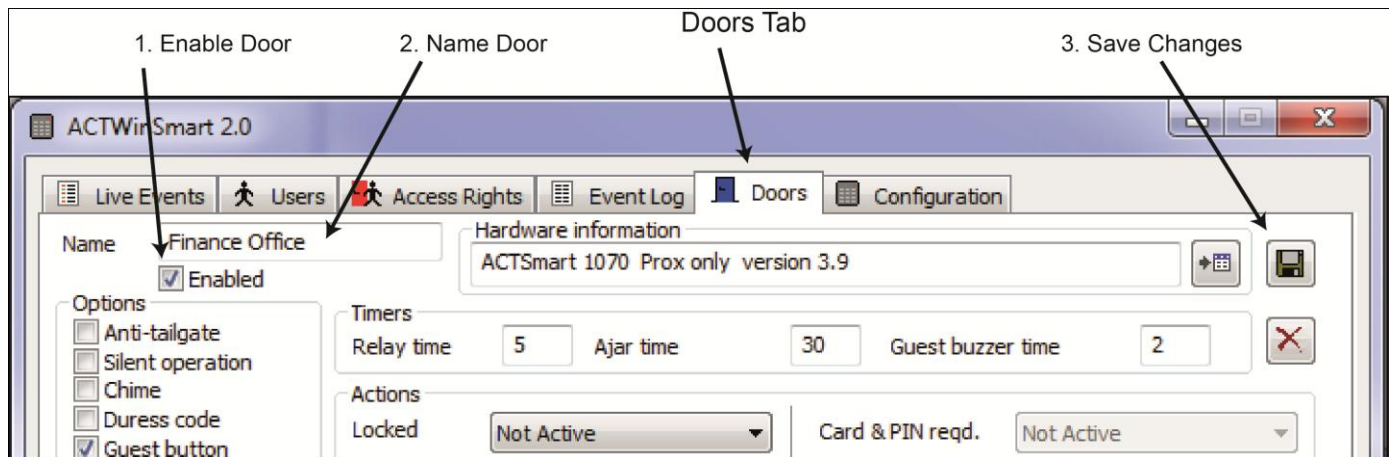
**Note:** *the User account has access to all screens except for the Doors tab and some Configuration data is read only access. The Installer has access to all screens.*

3. **Login under the installer** account using “**9999**” as the default password.
  - The ACTWinSmart software will automatically check all COM ports for the ACTsmart Controller.
  - Ensure the Controller reports Online on the live events tab.


The red LED on the ACTsmart Controller will blink rapidly indicating the controller is communicating with the ACTWinSmart software.

If there is a problem with communications to the PC, the red LED will blink once every second. See trouble shooting section to help solve the problem.

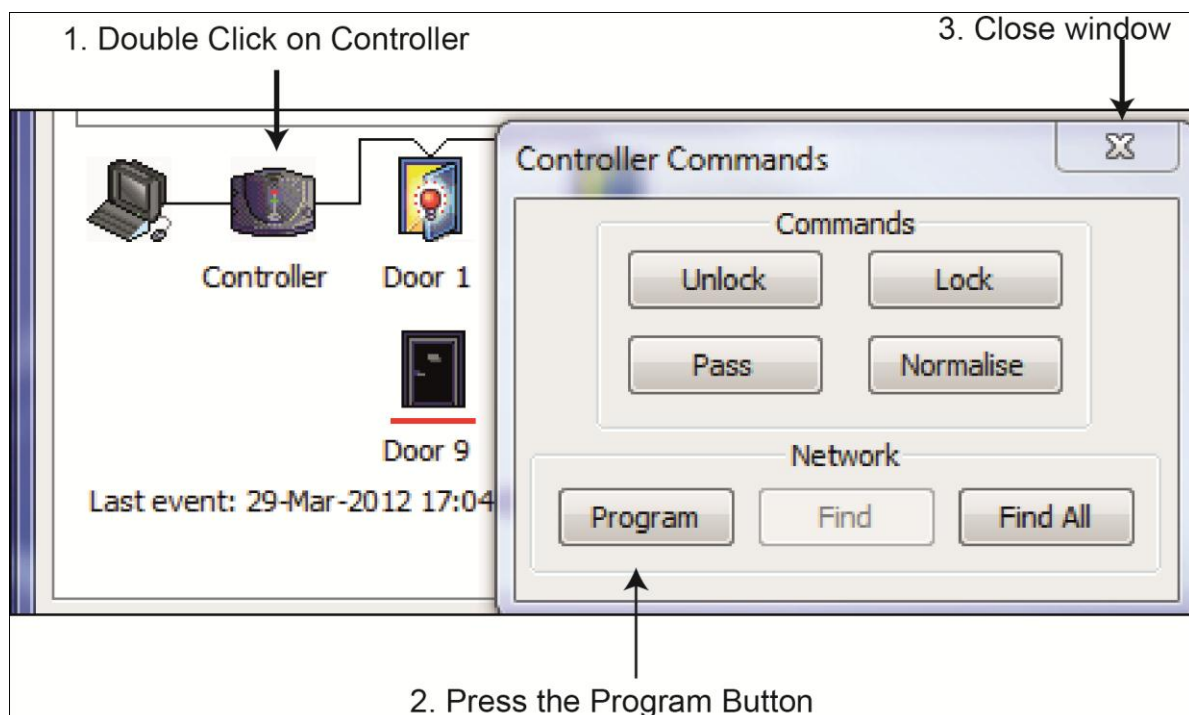
## 2.4 Enable each ACTsmart2 reader.



From the Doors tab  select each door from the list of doors

1. Enable the door
2. Enter an appropriate door name
3. Press the Save button. 
4. The doors will appear at the bottom of the screen coloured black (offline)
5. Repeat steps 1 to 3 till all doors are enabled and named

## 2.5 Program the ACTsmart2 readers.



1. Double click on the controller icon to launch the Controller Commands window
2. Press the Program button. All ACTsmart2 readers will start beeping the address to be programmed, (one beep for door address 1 then two beeps for door address 2 and so on).

All readers will beep once for address 1. Present a card (or fob) or press a key on the ACTsmart2 reader/keypad that you require to be addressed as door 1.

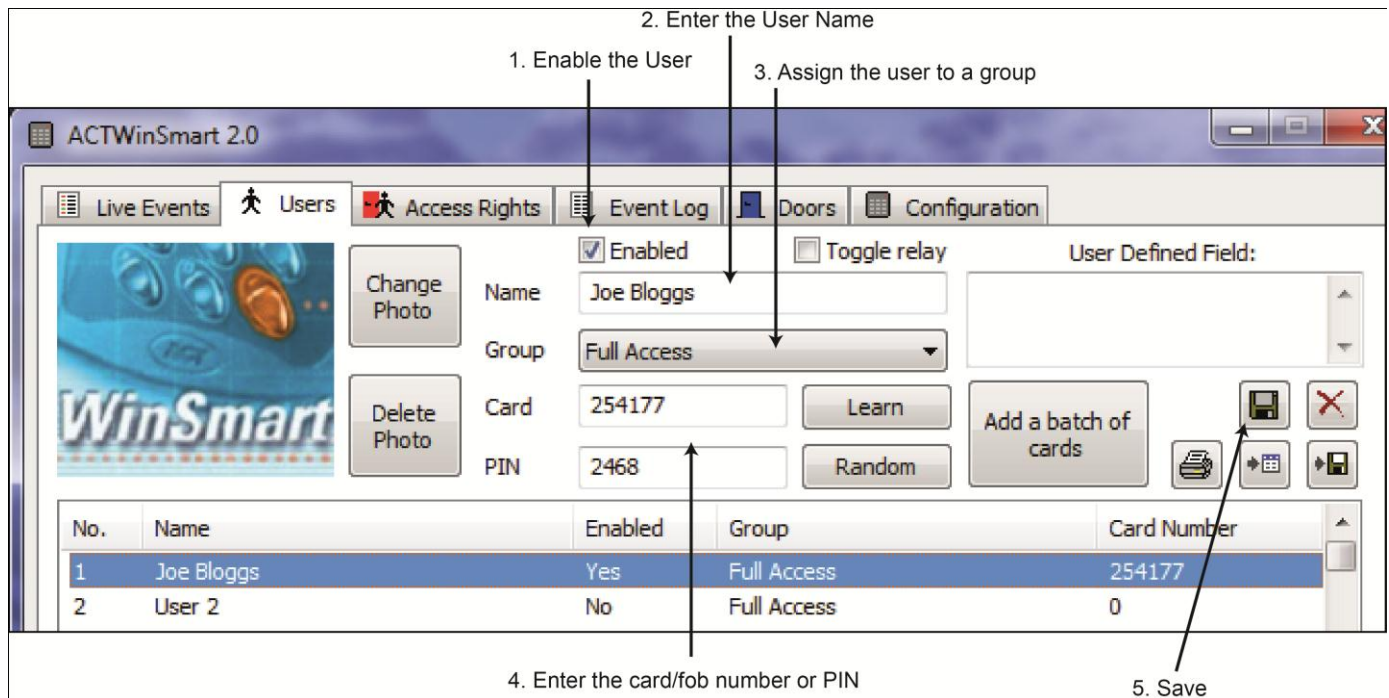
All remaining readers will beep twice. Present a card (or fob) or press a key on the ACTsmart2 reader/keypad that you require to be addressed as door 2.

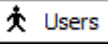
Continue this process until all readers are addressed.


Note: During the programming process all user and configuration information is sent to the ACTsmart2 units.

3. Close the Controller Commands window (press the X on the top right corner).  
Note: the doors will appear on the bottom of the window in blue. If doors do not appear on the bottom of the screen, repeat step 2.4 ensuring the doors are enabled.

## 2.6 Add a User Setup



From the Users tab  select an unassigned user from the list of users

1. Enable the user
2. Enter the user name
3. Set the group to Full Access from the drop down list.
4. Enter the number printed on the access card or fob
5. Press the Save button. 
6. Present the card to the ACTSmart2 reader and ensure access is granted.
7. Repeat steps 1 to 6 for all users

Note: Cards or fobs may be bulk loaded in to the system. Press the “Add a batch of cards” button and enter the first and last card also enter the first user (the batch of cards must be continuous). The first user is assigned the first card, the second user will automatically be assigned card 2 and so on.

The users can be bulk enabled and assigned to an access group and random PINs generated for each user if required.

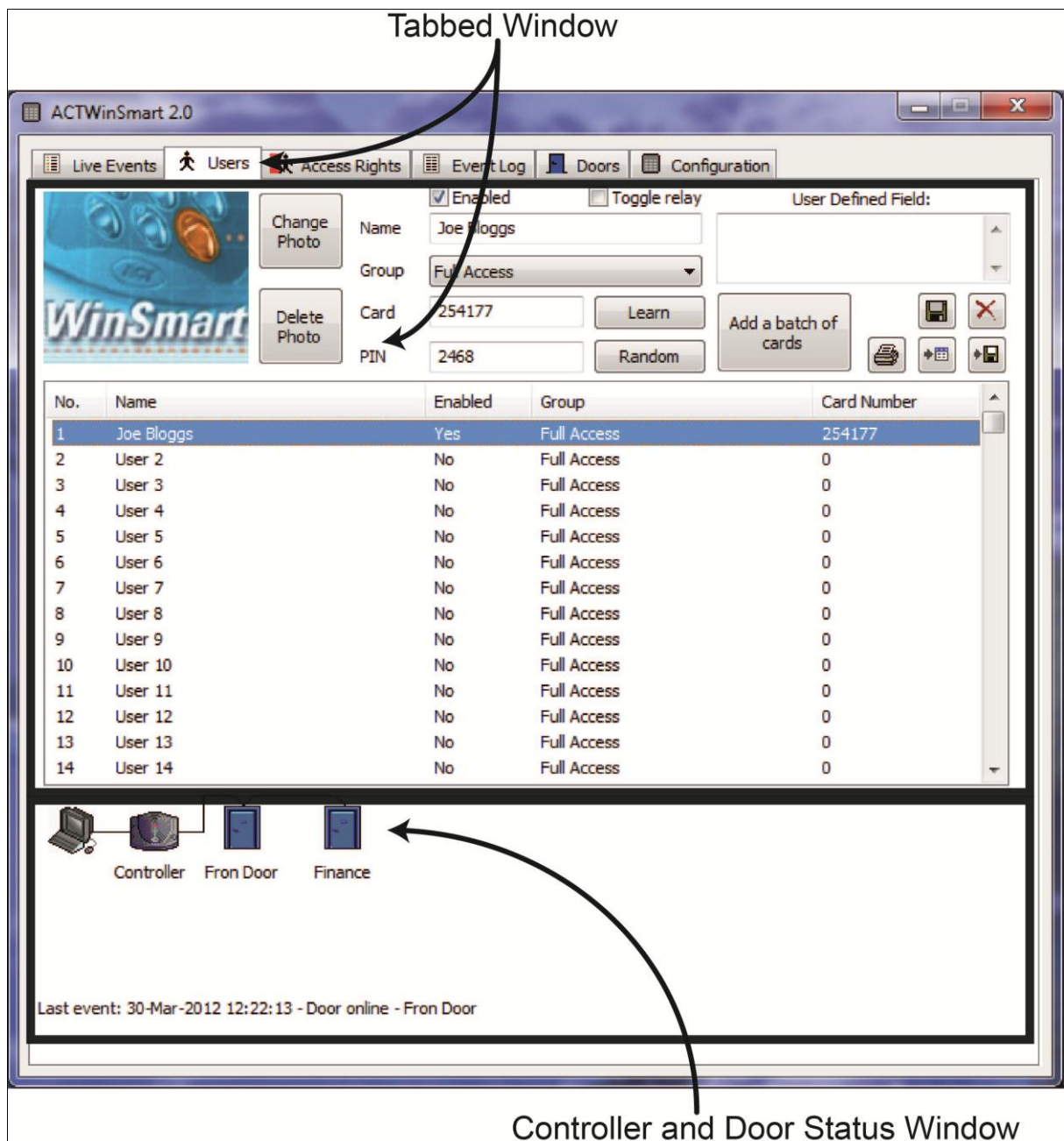
## Quick setup is now complete

### 3. ACTWinSmart Software overview

The ACTWinSmart software window is divided into two sections.

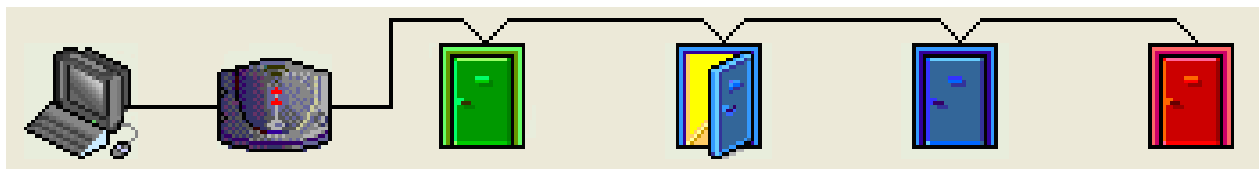
The top window corresponds to the selected tab. This window will change as the tabs change.


The bottom part of the window shows the live controller and door status and never changes regardless of the selected tab.



## Door Status Icons.

The status of the doors is displayed at the bottom of the screen and is continuously updated.



 <p><i>Door locked and closed</i></p>	 <p><i>Door locked and closed with alarm condition</i></p>	 <p><i>Door locked but left open</i></p>	 <p><i>Door locked but left open with alarm condition</i></p>
 <p><i>Door unlocked or access granted. Door remains closed.</i></p>	 <p><i>Door unlocked or access granted and in alarm condition</i></p>	 <p><i>Door unlocked or access granted and door opened.</i></p>	 <p><i>Door unlocked or access granted, door left open and in alarm condition.</i></p>
 <p><i>Door closed and locked - no access permitted</i></p>	 <p><i>Door closed and locked - no access permitted, door in alarm condition</i></p>	 <p><i>Door is offline</i></p>	



## Controller and Door Commands

To control all doors, double click on the controller at the bottom of the screen. To control a door, double click on the door.



### Unlock:

The Unlock command will unlock all doors connected to the controller or unlock a single door if selected. When the doors are unlocked, the door icon on the bottom of the screen will turn green. The LED on the ACTsmart2 readers will flash green indicating the door is unlocked by a command.

### Lock:

The Lock command will lock all doors connected to the controller or a single door. When the doors are locked the door icon on the bottom of the screen will turn red. The LED on the ACTsmart2 reader will flash red indicating the doors is locked by a command.

When the doors are locked by command, no user will be allowed access.

### Pass:

The Pass command will unlock all doors connected to the controller or a single door for the programmed relay time (default 5 seconds).

### Normalise:

The Normalise command will place all doors connected to the controller or a single door into a normal operating mode. This cancels any Lock or Unlock commands. A access

control card or PIN is required to gain access. The door icon at the bottom of the screen will turn blue.

### **Program:**

The program operation assigns door numbers to the ACTsmart2 readers. The readers must be factory defaulted before selecting the command.

All ACTsmart2 readers without a door numbers start to beep. The number of beeps determines the door number to be programmed. For example, if door 3 is to be programmed, all unassigned ACTsmart2 readers will beep 3 times.

Present a card or press a key on the ACTsmart2 reader you wish to be assigned to the door address.

### **Find**

The ACTsmart2 reader assigned to the door will start to beep. Present a card or press a key on the ACTsmart2 to stop the beeping.

### **Find All**

All the ACTsmart2 readers will beep their address. This is useful for locating a reader or for diagnostic purposes.

## 4. Live Events



All live events that occur on the system are displayed in the live events tab. The events are colour coded, clearly indicating the type of the event that has occurred and its priority.

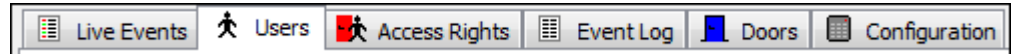
To review historical events use the “Events Log Tab”

Time	Event	Location	Details
26-Apr-2012 11:18:42	Access granted	Main office	Joe Bloggs
26-Apr-2012 11:18:37	Access granted	Front Door	Joe Bloggs
26-Apr-2012 11:18:30	Door forced	Front Door	
26-Apr-2012 11:18:15	Exit button used	Main office	
26-Apr-2012 11:18:08	Access granted	Main office	Joe Bloggs
26-Apr-2012 11:17:58	Access granted	Front Door	Joe Bloggs
26-Apr-2012 11:17:44	Access granted	Main office	Mary Bloggs
26-Apr-2012 11:17:38	Access granted	Front Door	Mary Bloggs
26-Apr-2012 11:12:37	Unknown card	Front Door	
26-Apr-2012 11:12:08	New database created		

Controller Front Door Main office

Last event: 26-Apr-2012 11:18:42 - Access granted - Main office

## 5. Users



All user management is performed in the Users tabs. From the list of users select the desired user to modify. To add a new user, select the next free user from the list.

**ACTWinSmart 2.0**

Live Events | **Users** | Access Rights | Event Log | Doors | Configuration

**User Management Form:**

- ☒ Enabled ☐ Toggle relay
- Name: Joe Bloggs
- Group: Full Access
- Card: 10214597
- PIN: 4597
- Buttons: Change Photo, Delete Photo, Learn, Random, Add a batch of cards
- User Defined Field: (empty)

No.	Name	Enabled	Group	Card Number
1	Joe Bloggs	Yes	Full Access	10214597
2	Mary Bloggs	Yes	Full Access	10214598
3	User 3	No	Full Access	0
4	User 4	No	Full Access	0
5	User 5	No	Full Access	0
6	User 6	No	Full Access	0
7	User 7	No	Full Access	0
8	User 8	No	Full Access	0
9	User 9	No	Full Access	0
10	User 10	No	Full Access	0
11	User 11	No	Full Access	0
12	User 12	No	Full Access	0
13	User 13	No	Full Access	0
14	User 14	No	Full Access	0

**System Diagram:**

```

graph LR
    Controller[Controller] --- FrontDoor[Front Door]
    Controller --- MainOffice[Main office]
  
```

Last event: 26-Apr-2012 11:18:42 - Access granted - Main office

## Enabled

Select this option to allow the users card or PIN to be recognised by the system. If this option is not selected, the user will not be allowed access.

## Toggle Relay

When the user is granted access, the door relay is toggled open. The door will remain permanently open until the next time a card or PIN is read from a user with toggle option enabled.

*Note: The toggle option must also be enabled on the door.*

## Name

Enter the name of the cardholder.

## Group

Select a user group from the dropdown box. Once the group is assigned to the user, the user then inherits the access rights that are programmed for that group.

*Note: User groups must be created from the Access Rights tab prior to using this option. See section on User rights.*

## Card

Enter the number printed on the user's proximity card or keyfob. Alternatively, click the Learn button to capture the number read from the ACTsmart2 reader. While in Learn mode, the ACTsmart2 reader will flash green waiting for a card or fob.

Note: a dedicated Learn reader can be connected to the ACTsmart Controller terminals marked READER.

## **PIN**

Enter the user PIN number, or have the software generate a random PIN by pressing the Random button.

## **Change Photo**

Select a jpeg image of the user from the computer. The users image will be display on the window.

## **Delete Photo**

Deletes the image of the user.

## **User Defined Field:**

The administrator can enter free format text, e.g. department, personal number etc..

## **Save**



Save the user changes to the database and transmits the changes to the ACTsmart Controller if online.

## **Delete**



Delete the user information from the database and the ACTsmart Controller.

## Import List of Users from file

ACTWinSmart software can import a list of user names from a comma separated value (.csv) file. ACT recommends the user list be first exported from the ACTWinSmart software. This may be used as a template, edited and imported back into ACTWinSmart

SmartUsetNumber	Name	CardNumber	PIN	UserGroup	Enabled	Options
1	Joe Bloggs	889750	1234	2	1	0

## Export List of Users to file

Users are exported to a comma separated value (.csv) file, (see format above).

## Print List of Users

Print a list of all enabled users.

## Add a batch of cards

Cards or fobs may be bulk loaded in to the system

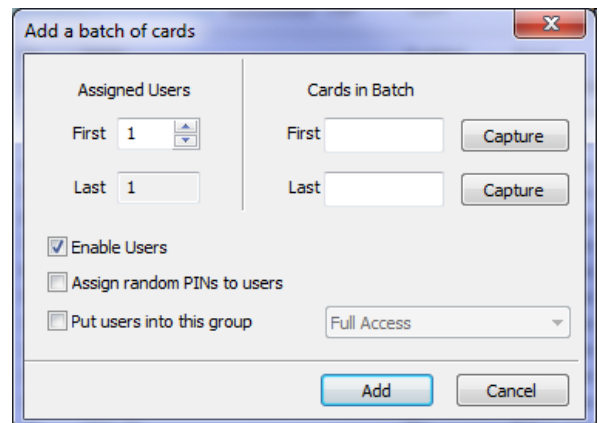
Enter the first and last card in the batch.

Enter the first user to be assigned the first card, the second user will automatically be assigned card 2 and so on.

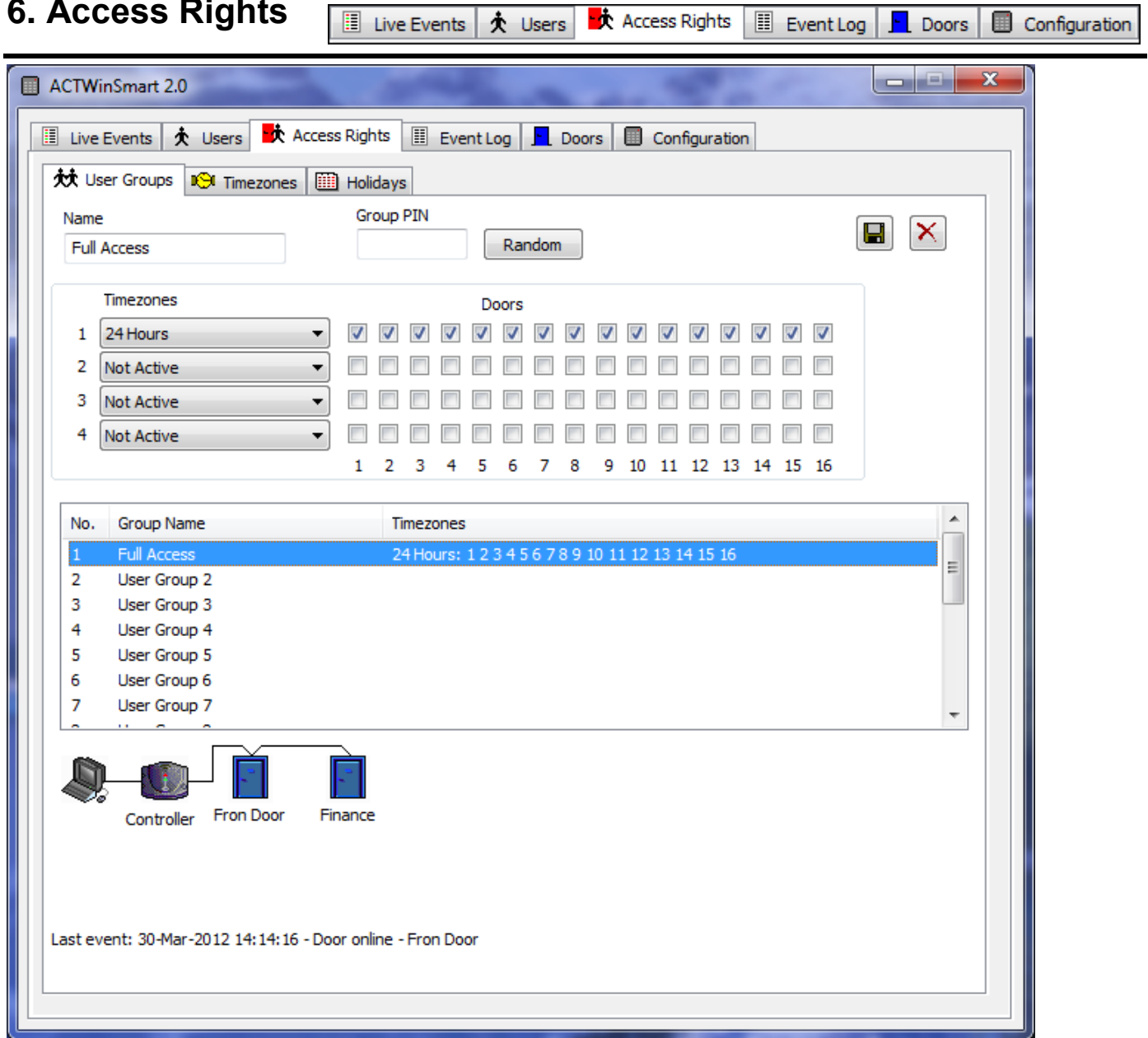
The users can be bulk enabled and assigned to an access group.

The system can generate random pins for each user.

*Note: batch cards must be consecutively numbered with no breaks in the numbering.*



## 6. Access Rights

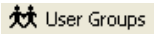


Access rights determine the **doors and times** a user is allowed access. This is the most important concept in an access control system. New PC users need to take the time to understand it properly.

Each user is assigned a user group. Each user group consists of 4 timezone/doors pairs. A user is only allowed access if the user group has the door assigned and the time zone is active.



6.1 User Groups



All user group management is performed in the User Groups tabs. The user group list shows all available user groups. Click a group from the list to modify. To add a new group, select an unassigned group from the list.

Name

Enter the name of the user group. ACT recommends using a name that reflects the type of users in the group Eg. ‘Staff’, ‘Cleaners’, etc. Use as few groups as possible.

Group PIN

Enter a PIN for the group. All users in the user group can use the group PIN for card and PIN access. If a user has a personal PIN assigned, then the group PIN is ignored.

Random

Generate a random PIN number for the group.


Timezones/Doors


Timezones		Doors															
1	24 Hours	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Four Timezone/Door pairs may be programmed for each user group.

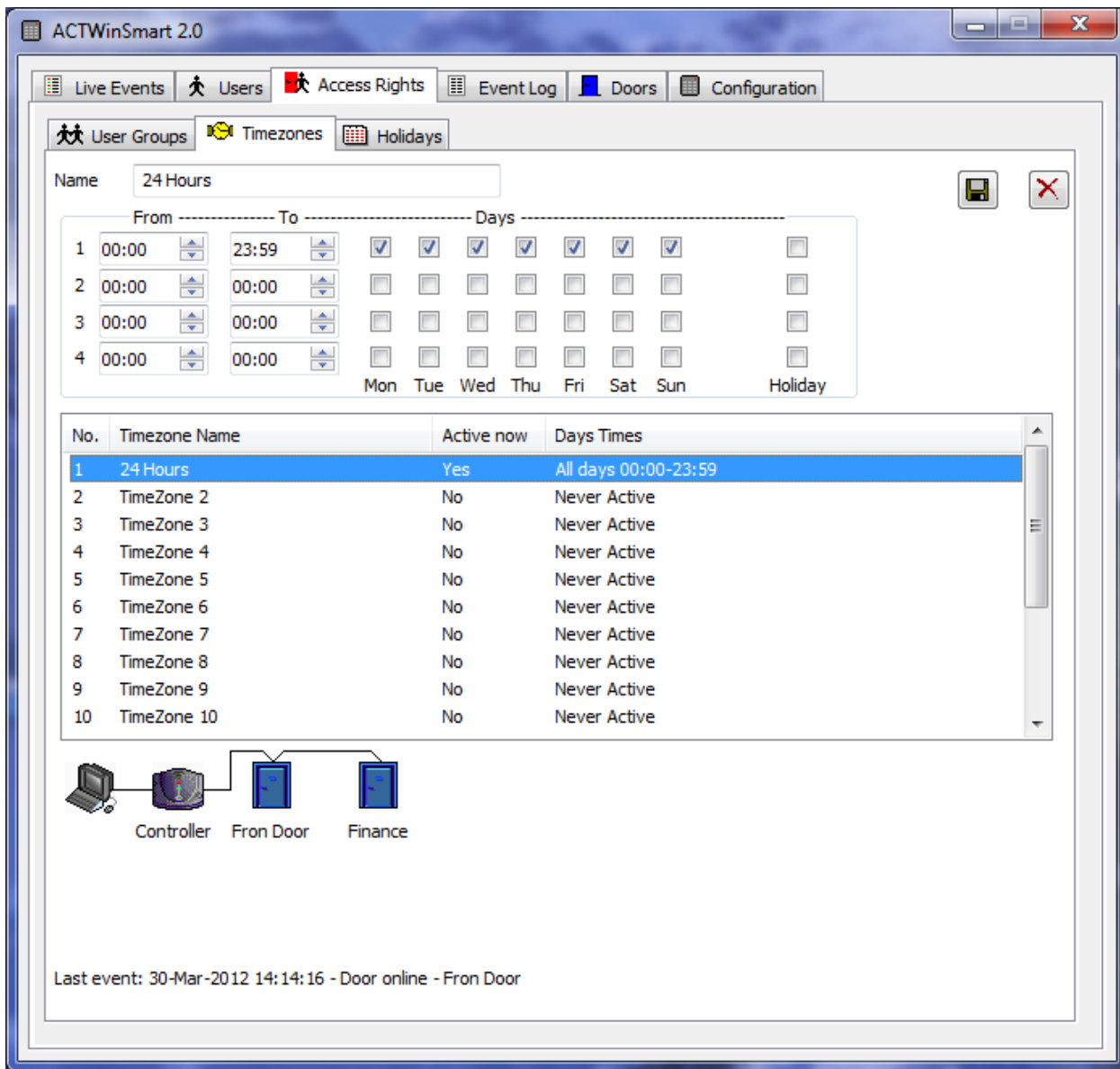
Select a timezone from the drop down box and select the doors by ticking the door boxes to be associated with the Timezone/Door pair.

**Note:** see section 6.2 Timezones for details on holidays

**Save**  Save the user group changes to the database

**Delete**  Delete the user group information from the database.

## 6.2 Timezones



From the list of timezones, select the desired timezone to modify. To add a new timezone, select the next free timezone from the list.

**Name**

Enter the timezone name that reflects the time period being programmed. (For example: 9to5Weekdays, Weekends, Holidays etc.).

	From	To	Days							
1	09:00	17:00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	00:00	00:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	00:00	00:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	00:00	00:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Mon	Tue	Wed	Thu	Fri	Sat	Sun	Holiday

**From / To**

Enter a start and end time the timezone is valid for. The time must be in the same 24 hour between 00:00 to 23:59.

**Days**

Select the days the timezone is valid for.

**Save**



Save changes to the database and transmits the changes to the ACTsmart Controller if online.

**Delete**



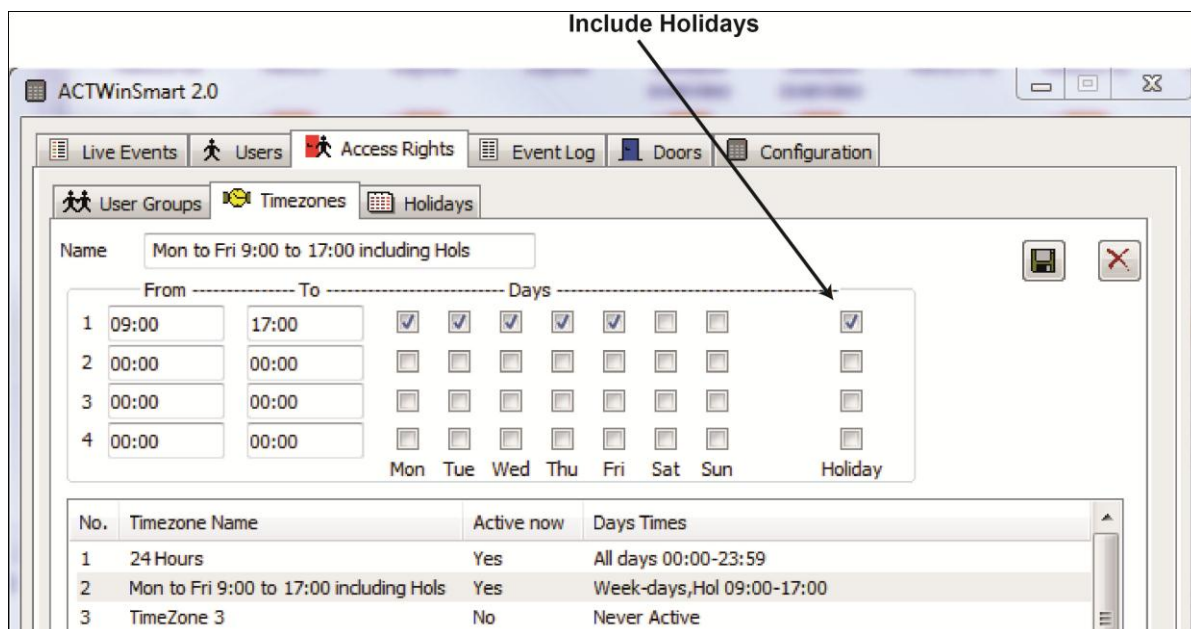
Delete the user group information from the database and the ACTsmart Controller.

## Holiday

Tick the holiday check box to include the corresponding holiday for all timezones otherwise the timezone will be disabled during the holiday. Time zones are used for access rights and timed actions.

See section 6.1 “User Group” and section 8.4 “Actions”

**Include Holidays**



ACTWinSmart 2.0

Live Events | Users | Access Rights | Event Log | Doors | Configuration

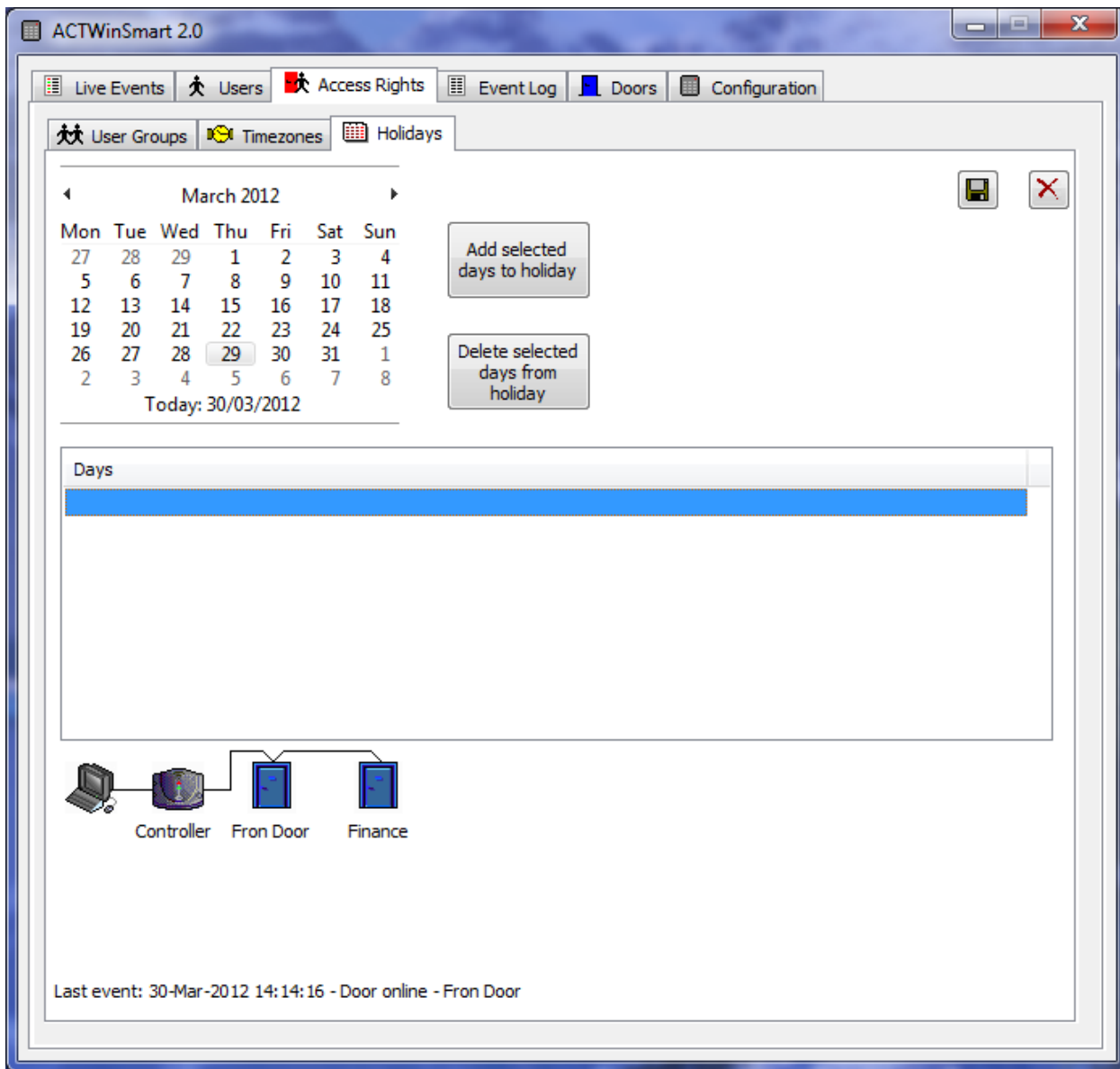
User Groups | Timezones | Holidays

Name: Mon to Fri 9:00 to 17:00 including Hols

	From	To	Days							
			Mon	Tue	Wed	Thu	Fri	Sat	Sun	Holiday
1	09:00	17:00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	00:00	00:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	00:00	00:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	00:00	00:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No.	Timezone Name	Active now	Days Times
1	24 Hours	Yes	All days 00:00-23:59
2	Mon to Fri 9:00 to 17:00 including Hols	Yes	Week-days,Hol 09:00-17:00
3	TimeZone 3	No	Never Active

## 6.3 Holidays

 Holidays


Holidays are used to suspend all “actions” and “usergroups” during a holiday.

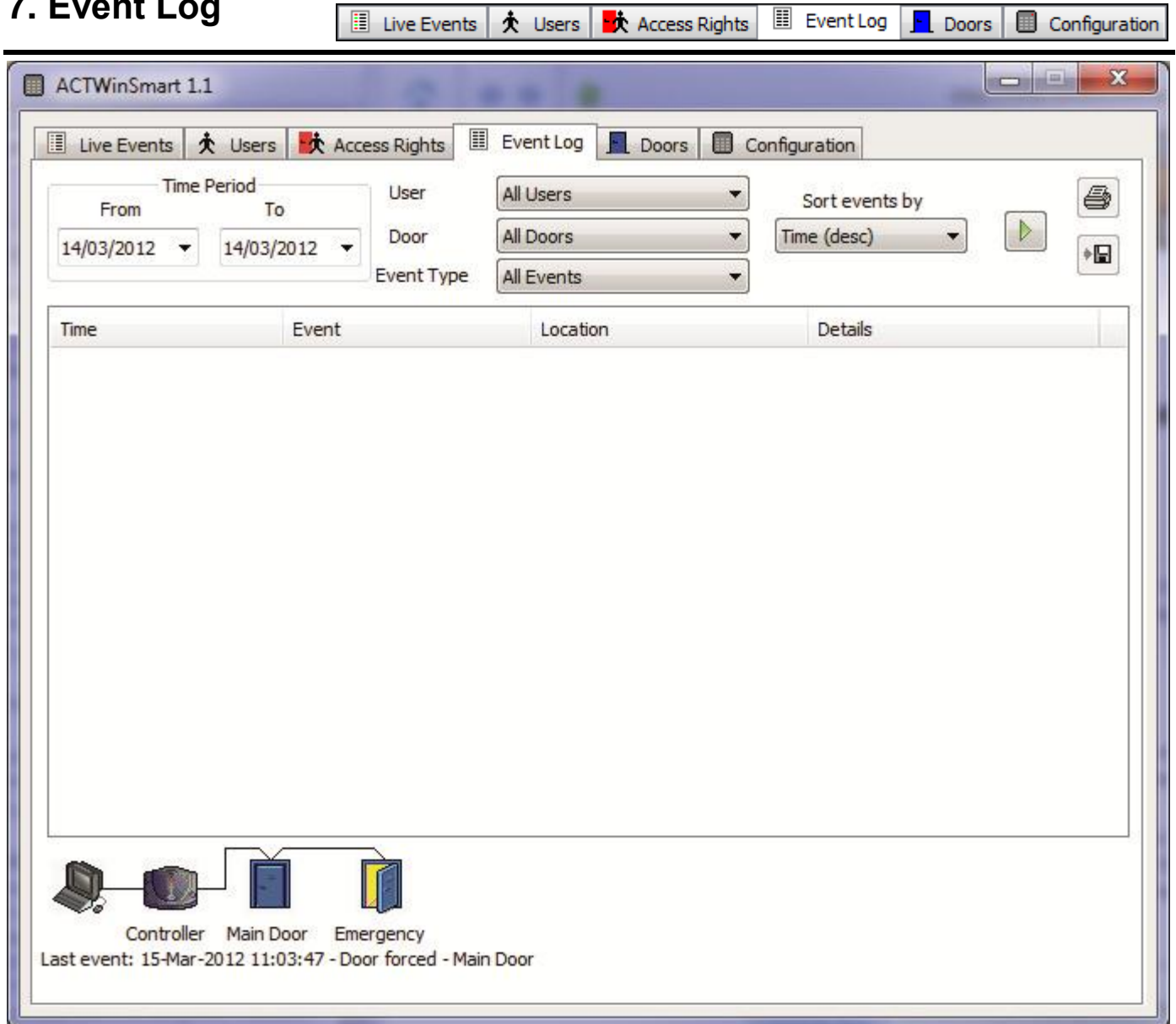
The calendar is the main navigation tool in the holiday view. Holidays must be maintained manually and can be entered up to 1 year in advance.

Select the desired date from the calendar and press “**Add selected days to holiday**”. The holiday is added to the list.

To delete a holiday from the list, highlight the holiday in the list and press “**Delete selected days from holiday**”.



## 7. Event Log



The Event Log tab can be used to analyse the previous 100,000 log events. The log can be filtered by date, user, door and event type. The search results are displayed in the event list and may be printed or saved in a comma separated file (.CSV).

## Time Period

The time period defines the **From** and **To** dates to report events.

## User

Filtering can be applied to all users or a single user.

## Door

Filtering can be applied to all doors or a single door.

## Event Type

Filtering can be applied to all events or event category,

## Sort Events By

The results of the report may be sorted according to time, event type, Door Number/Name, User Number/Name in ascending or descending order.

## Run



The Run command will search the database and return the filtered events ordered by the sort criteria.

The maximum number of events that will be returned is 10,000. If the report returns more than 10,000 events then further filtering will be required.

## Print



Print the results from the search.

## Export to CSV file



Export the results of the report to a comma separated file (.csv).



## 8. Doors

Live Events Users Access Rights Event Log Doors Configuration

ACTWinSmart 2.0
\_ □ ×

Live Events Users Access Rights Event Log Doors Configuration

Name

☒ Enabled

**Options**

☐ Anti-tailgate

☐ Silent operation

☐ Chime

☐ Duress code

☒ Guest button

☒ Door forced

☒ Door ajar

☐ Fire door

☐ Security door

☐ Toggle

☐ Permanent backlight

☐ Auto backlight

**Hardware information**

ACTSmart 1080 PIN&Prox version 3.9

**Timers**

Relay time  Ajar time  Guest buzzer time

**Actions**

Locked

Unlocked

AUX IO 1

AUX IO 2

Card & PIN reqd.

Any card

Card or PIN

PIN only

**Inputs and Outputs**

Input  AUX IO 1  AUX IO 2

No.	Door Name	Status
1	Fron Door	Enabled
2	Finance Office	Enabled
3	Door 3	Disabled
4	Door 4	Disabled
5	Door 5	Disabled
6	Door 6	Disabled

Controller    Fron Door    Finance

Last event: 30-Mar-2012 14:16:36 - Door online - Fron Door

Each ACTsmart2 reader is individually configured. Select the reader that requires configuration from the list of readers.

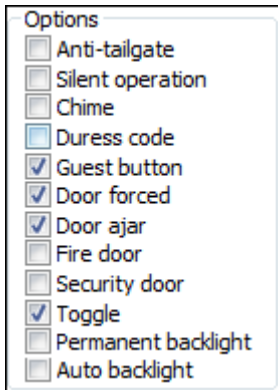
### Name:

Enter the name for the door. This should describe its location in the building (E.g. Front Door etc.).

### Enabled

When enabled the ACTsmart2 reader/keypad will appear on the bottom of the screen and communicate with the ACTsmart controller.

## 8.1 Options



Options	
<input type="checkbox"/>	Anti-tailgate
<input type="checkbox"/>	Silent operation
<input type="checkbox"/>	Chime
<input checked="" type="checkbox"/>	Duress code
<input checked="" type="checkbox"/>	Guest button
<input checked="" type="checkbox"/>	Door forced
<input checked="" type="checkbox"/>	Door ajar
<input type="checkbox"/>	Fire door
<input type="checkbox"/>	Security door
<input checked="" type="checkbox"/>	Toggle
<input checked="" type="checkbox"/>	Permanent backlight
<input type="checkbox"/>	Auto backlight

### 8.1.1 Anti-Tailgate

When the door relay is active (following a valid code or button release), the door relay timer is truncated to 2 seconds when the door contact opens. This ensures that the door will be locked as soon as it closes, and any person following will have to present a card or enter a code.

### 8.1.2 Silent Operation

The ACTsmart2 keypad operates silently, there is no audible tones (key-presses or confirm tones) are produced from the built-in buzzer.

### 8.1.3 Chime

When set, and the door contact is opened, the built-in buzzer makes a chime sound and the buzzer output activates for 2 seconds if it is set.

See section 8.2 to configure buzzer activation on AUX IO 1 or AUX IO 2.

### 8.1.4 Duress Code

A duress PIN is any valid PIN incremented by one

For example, if the PIN code is 7685, then the duress PIN is 7686.

When duress PIN is entered, the door opens normally and the Door Alarm output activated. The output will be reset when a valid user PIN or card is presented.

See section 8.2 to configure Door Alarm output on AUX IO 1 or AUX IO 2

### **8.1.5 Guest Button**

When the tick ✓ key on the ACTsmart2 keypad is pressed, the buzzer output is activated for the duration programmed in the guest buzzer timer.

See section 8.2 to configure Buzzer on AUX IO 1 or AUX IO 2 also “ACTsmart2 Installation Diagram” at the back of this manual.

### **8.1.6 Door Forced**

Door Forced Event is generated if the door contact opens while the door is locked.

The alarm condition is deactivated when a valid card or PIN is next entered.

See section 8.2 to configure Door Alarm on AUX IO 1 or AUX IO 2.

### **8.1.7 Door Ajar**

When the door contact has been open for longer than the door ajar time, a Door Ajar event is logged in the software.

Deactivate the alarm condition by closing the door and presenting a valid card or entering a valid PIN.

See section 8.2 to configure Buzzer on AUX IO 1 or AUX IO 2 (If required)

See section 8.2 to configure Door Alarm on AUX IO 1 or AUX IO 2 (If required)

### **8.1.8 Fire Door**

All doors marked as fire doors will unlock for the duration of the fire signal.

The signal from the fire panel must be connected to one of the inputs on the ACTsmart2 readers.

See section 8.2 to configure Fire override input at each door.

See Section 11: Wiring Diagrams for ACTsmart2 Fire Alarm override connections.

### **8.1.9 Security Door**

All doors marked as Security Door will remain locked while the intruder panel is armed.

The signal from the intruder panel must be connected to one of the inputs on the ACTsmart Controller.

See section 9.1 to configure the door for “Panel Armed input”

#### **8.1.10 Toggle**

The door relay toggles locked and unlocked for each valid user access. The user must have the Toggle option assigned.

The LED flashes green on the ACTSmart2, indicating the door is toggled open.

#### **8.1.11 Permanent Backlight**

The back lighting on the keypad is permanently activated.

#### **8.1.12 Auto Backlight**

The back lighting on the keypad will activate on a key press.

## 8.2 Inputs and Outputs

Inputs and Outputs			
Input	Door Release Button ▼	AUX IO 1	Door Contact ▼
		AUX IO 2	Door Release Button ▼

ACTsmart reader input and output combination		
Input	AUX IO 1	AUX IO 1
Door Contact	Door Contact	Door Contact
Fire Alarm Override	Fire Alarm Override	Fire Alarm Override
Lock Door	Lock Door	Lock Door
Door Release Button	Door Release Button	Door Release Button
Reader Data	Interlock	Interlock
	Door Alarm	Door Alarm
	Follow	Follow
	Buzzer	Buzzer
	Smart Lock	Smart Lock
	Reader Clock	Green LED

Each ACTsmart2 unit has one programmable input and two programmable auxiliary input/outputs.

### 8.2.1 Door Contact

Required to monitor if a door is opened or closed, used for Door Forced, Door Ajar and Interlock reporting

### 8.2.2 Fire Input Override

The Fire Alarm input pin is normally held low (0V), when this input from the fire panel to the reader/keypad is high, the door opens and the green LED flashes. The Fire door option must be selected. See Section 11: Wiring Diagrams for ACTsmart2 Fire Alarm override connections.

### 8.2.3 Lock Door

When this input is low (0V) the door locks and the red LED flashes

### 8.2.4 Door Release Button

When this input is low (0V) the door opens for the programmed relay time, (default 5 seconds).

### **8.2.5 Reader Data (Input only)**

This input configures the reader to accept **Data** signal from a Clock&Data reader. Connect the data output line from a Clock&Data reader to the input terminal.

See Reader Clock and Green LED

### **8.2.6 Interlock**

This normally behaves as an input and locks the door while the input is low. When the door relay is active or the Door Contact is open the input becomes an active output.

See Section 11: Wiring Diagrams for ACTsmart2 Interlock connections.

### **8.2.7 Door Alarm**

Door Alarm output activates while an alarm is present – A door alarm may be a door forced, door ajar, tamper or duress.

### **8.2.8 Follow**

This output follows the state of the door relay.

### **8.2.9 Buzzer**

This output activates for Door Chime or Door Alarms

### **8.2.10 Smart Lock**

The ACTsmart Lock adds additional security to the ACTsmart2 unit by allowing the installer to locate the lock control relay inside a secure area (usually housed inside the power supply). The Smart Lock only operates its' relay when a valid card or PIN is presented to the ACTsmart2 reader.

Since the Smart Lock is inside a secure area, an attacker has no access to the lock control relay.

### **8.2.11      *Reader Clock***

This input configures the reader to accept **Clock** signal from a Clock&Data reader.  
Connect the Clock output line from a Clock&Data reader to the AUX IO 1 terminal.

See Reader Data and Green LED

### **8.2.12      *Green LED***

This output follows the state of the Green LED from a Clock&Data reader.

See Reader Data and Reader Clock.

## 8.3 Timers

Timers		
Relay time	<input type="text" value="5"/>	Ajar time
		<input type="text" value="30"/>
Guest buzzer time	<input type="text" value="2"/>	

### 8.3.1 Door Relay Time

The duration in seconds that the relay switches on a valid access granted.

### 8.3.2 Door Ajar Time

The time delay in seconds that a door can remain open before generating a Door Ajar event.

To deactivate a Door Ajar alarm, close the door and present a valid token or PIN (access granted).

Door Ajar **Option** must be selected.

### 8.3.3 Guest Buzzer Time

When the tick ✓ key on the keypad is pressed the buzzer output will activate for the programmed duration.

The Guest button **Option** must be select.



## 8.4 Actions

Actions	
Locked	Not Active ▼
Unlocked	Not Active ▼
AUX IO 1	Not Active ▼
AUX IO 2	Not Active ▼

Card & PIN reqd.	24 Hours ▼
Any card	Not Active ▼
Card or PIN	Not Active ▼
PIN only	Not Active ▼

Actions, (also referred to as Timed Actions), allow timezones to be associated against certain actions at a door. Some of the actions are mutually exclusive such as Lock and Unlock, Card&PIN and PIN only.

Example: To configure a reader for Card and PIN access during a defined time, create a timezone and select it from the “Card & PIN reqd” dropdown list box. Save the change.

**Note:** see section 6.2 Timezones for details on creating and managing timezones.

### 8.4.1 Locked

For the duration of the assigned timezone, the door remains locked. The Red LED on the ACTsmart2 will flash. Access will not be permitted. Cards and Pins will not be acknowledged by the readers.

### 8.4.2 Unlocked

For the duration of the assigned timezone, the door remains unlocked. The Green LED on the ACTsmart2 will flash.

### 8.4.3 AUX IO 1

For the duration of the programed timezone, the output AUX IO 1 is active.

### 8.4.4 AUX IO 2

For the duration of the programed timezone, the output AUX IO 2 is active.

#### **8.4.5 Card & PIN Required**

For the duration of the assigned timezone, a valid PIN code must be entered after any Card is presented.

#### **8.4.6 Any Card**

For the duration of the assigned timezone, Any Card presented will be granted access, even if it would not normally be granted access. ***The card is not logged and this offers little or no security..***

#### **8.4.7 Card or PIN**

For the duration of the assigned timezone, either a valid Card or a valid PIN will allow access.

#### **8.4.8 PIN Only**

For the duration of the assigned timezone access is granted only by entering a valid PIN.

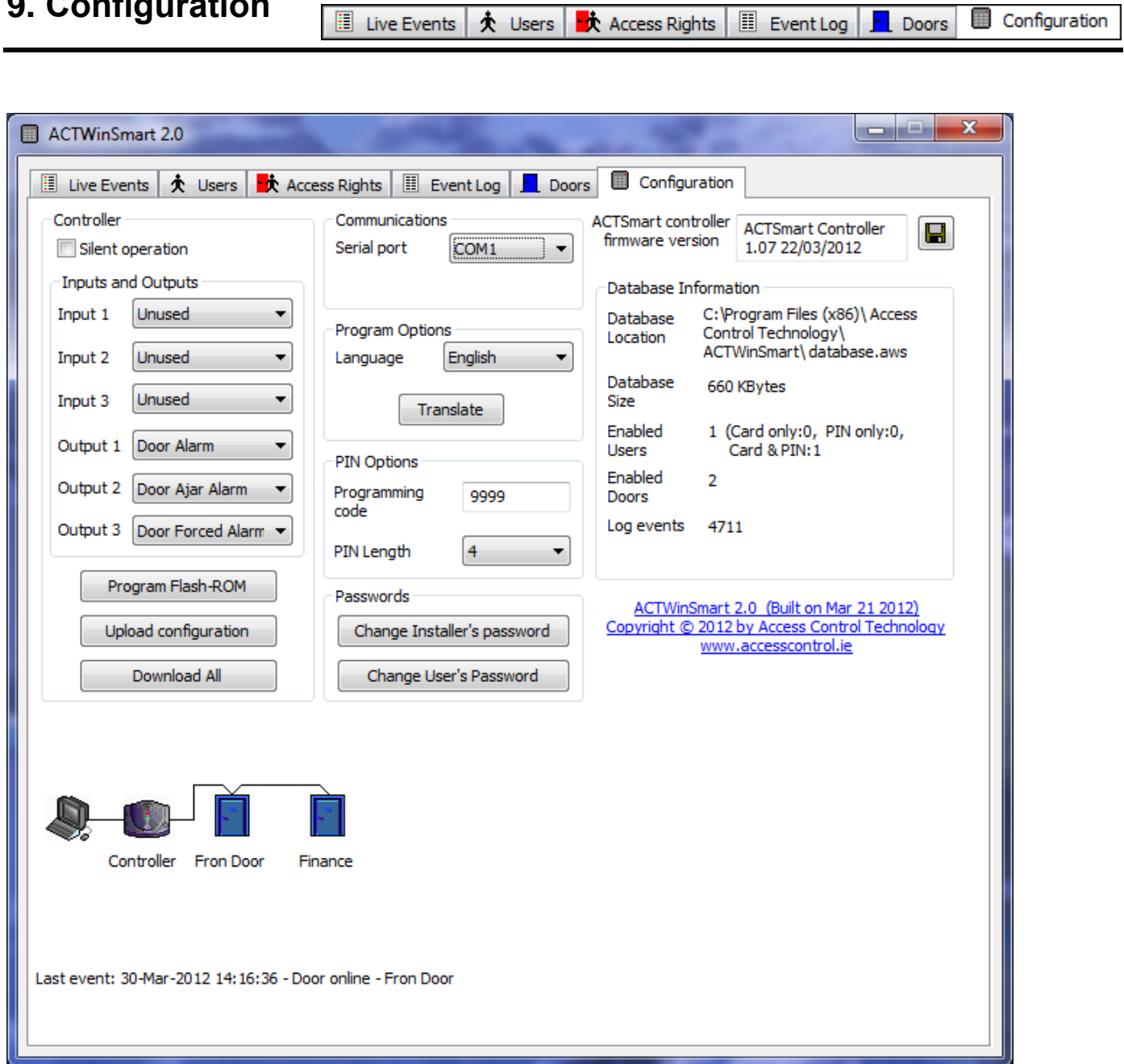
#### **8.4.9 Save**

Save the door changes to the database and to the ACTsmart Controller if online.

#### **8.4.10 Delete**

Delete the door information from the database and the ACTsmart Controller. The door information is restored to its default values.

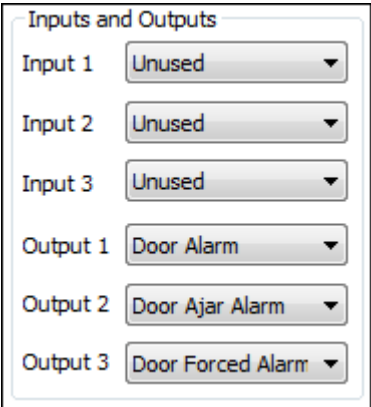
## 9. Configuration




### ***Silent operation***

Set to disable the buzzer on the ACTsmart Controller.

9.1 Inputs and Outputs



Configurable Input and Output	
Input 1,2,3	Output 1,2,3
Unused	Unused
Fire Alarm Override	Door Alarm
Tamper	Door Ajar Alarm
Panel Armed	Door Forced Alarm
	Duress Alarm
	Fire Alarm
	Tech Fault Alarm
	Any Door Open

Use the down arrow  to select a function for the 3 inputs and 3 outputs on the ACTsmart Controller.

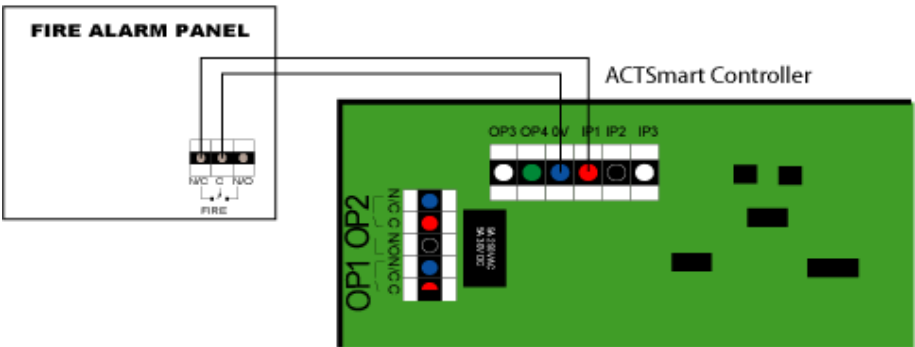
9.1.1 Unused

All inputs and outputs are ignored for the particular input or output terminal.

9.1.2 Fire Alarm Override

This function allows doors selected as Fire Doors (see Doors Tab) to open if the system receives a fire signal. A 0Volt signal from a fire alarm (or other) system is applied to this input pin. When the 0Volt signal is removed all doors selected as Fire Doors are held open until the 0Volt signal is re-applied.

**Note:** This facility is present for convenience only. It does not remove the need to have an alternate mechanical means of escape such as a breakglass.



### **9.1.3 Tamper**

When the input is 0Volt (held low) the tamper is closed. If the 0V is removed, then any outputs assigned as Technical Fault will activate.

### **9.1.4 Panel Armed**

When the input is 0Volt (held low) the intruder panel is armed. No access is permitted at any ACTsmart2 readers that are assigned the Security Door option (see Security doors option in Section 8.1 Doors).

### **9.1.5 Door Alarm**

This output activates while an alarm is present on any door – A door alarm may be a door forced, door ajar, tamper or duress.

### **9.1.6 Door Ajar Alarm**

If any door is open for longer than the Door Ajar Time, this output will activate. It will remain active until the door is closed and a valid card or PIN presented.

### **9.1.7 Door Forced Alarm**

If any door contact opens while the door relay is locked, this output will activate. It will remain active until the door is closed and a valid card or PIN presented.

### **9.1.8 Duress Alarm**

The Duress alarm occurs whenever a duress code is entered. The duress code is the PIN code incremented by 1. The output is deactivated when a valid card or PIN is entered.

### **9.1.9 Fire Alarm**

While the Fire Alarm input is active, this output is active.

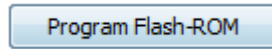
### **9.1.10 Tech Fault Alarm**

This output will activate if a tamper occurs on any ACTsmart2 readers or on the ACTsmart controller. It will also activate if an ACTsmart goes offline.

### **9.1.11      *Any Door Open***

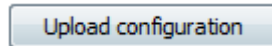
This output will activate if any door is open.

### **9.1.12      *Program Flash-ROM***



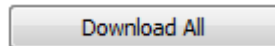
Click this button to upgrade the ACTsmart controller to the latest firmware.

### **9.1.13      *Upload Configuration***



Click this button to upload the settings from the ACTsmart Controller to the database. Only use this if the original database has been lost or corrupted. This button should NOT be used normally as it will overwrite the database.

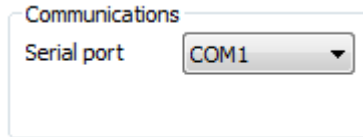
### **9.1.14      *Download All***



Click this button to download the database to the ACTsmart controller. When downloading, the controller is returned to its default state and normal operation of the controller may be temporarily interrupted during the download. Closing the application during a download or cancelling the download will leave the controller in an indeterminate state.

## 9.2 Communications

### 9.2.1 Serial Port

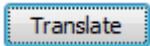
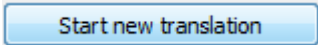


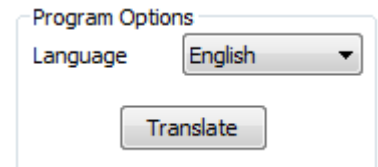
The screenshot shows a window titled 'Communications'. Inside, there is a label 'Serial port' followed by a dropdown menu that currently displays 'COM1'.

Select the serial port that is connected to the ACTsmart controller. If you are not sure which COM port is connected to the controller, select Auto-detect. The application will then find the controller and update the display with the COM port.

## 9.3 Language Options

**Language :** Choose a language from the drop down box to view the program in.

**Translate:** Click on the  button to translate the program from English to another language. Then, click on the  button. The text for the new language may now be translated. Care must be taken not to enter too many characters for the text. Try to keep the length of the text the same as the English text where possible.

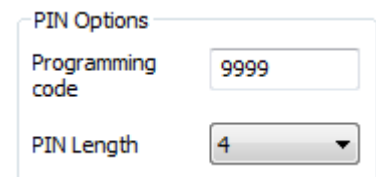


The screenshot shows a window titled 'Program Options'. It contains a 'Language' dropdown menu set to 'English' and a 'Translate' button below it.

## 9.4 Pin Options

**Programming Code:** Enter a programming code for the ACTSmart2 units.

**PIN Length:** The length of the PIN codes may be set to 4, 5 or 6.

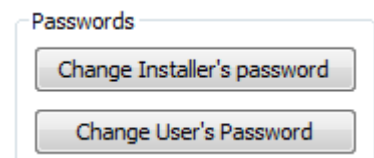


The screenshot shows a window titled 'PIN Options'. It has a 'Programming code' text field containing '9999' and a 'PIN Length' dropdown menu set to '4'.

## 9.5 Passwords

**Change Installer's Password:** Enter a new password for the Installer

**Change User's Password:** Enter a new password for User



The screenshot shows a window titled 'Passwords'. It contains two buttons: 'Change Installer's password' and 'Change User's Password'.

## 9.6 Save



Click this button to save to the database.

## 10. Trouble Shooting

---

### 10.1 Defaulting ACTsmart2 readers/Keypads.

#### Restoring Factory Defaults on ACTsmart2 1070 and 1070pm

##### A. Assigning a Programming Card to the ACTsmart2 1070 or 1070PM

To default an ACTsmart2 1070/1070PM readers (Prox Only), a Programming Card must be assigned to the reader2. The Programming Card may be any ACT proximity card or fob.

To assign a Programming Card to the ACTsmart2 1070/1070 PM reader perform the following 5 steps:

1. Power up the device with LKI removed and tamper open (by removing the main unit from the mounting plate or the surface mount collar). Within 10 seconds of power up Present the programming card to the reader.
2. Take the card away from the reader for 1 second (more than 20 cm),
3. Within a further 10 seconds replace LKI. The reader will beep.
4. The card is now set as the Programming Card. Replace the ACTsmart2 on the mounting plate / surface mount collar to close tamper. (Note: ACT recommends using an ACTsmart2 PIN and Prox device (1080) if a network is required).

##### B. Defaulting an ACTsmart2 1070 or 1070pm reader.

Present the programming card 5 times to the ACTsmart2 read, the Buzzer sounds intermittently and the LED flashes RED to warn you are about to default the system.

Present a non-programming card which defaults the unit and deletes the programming card.



## **Restoring Factory Defaults on ACTsmart2 1080 and 1090**

Enter Programming code followed by 80 followed by ✓ (“✕ 9999 80 ✓”) If this is done on the Master ACTsmart2 then all ACTsmart2’s on the network are defaulted (including the Master). If it is done on a standalone keypad then only the keypad defaulted.

## **Restoring Factory Defaults on ACTsmart2 1080 and 1090 when the programming code has been forgotten**

If the programming code has been forgotten, power up with the tamper open (by removing the main unit from the mounting plate or the surface mount collar), while holding down the ✕ key. Release the ✕ key and then enter the default Programming Code (9999).

Defaulting memory takes 3-4 seconds. During this time, the buzzer will sound an elongated tone.

## 10.2 Doors are not displayed on the software

Check the door is enabled and changes are saved.

## 10.3 Controller won't come online

Check the following:

1. Connections from PC to the ACTsmart Controller (check diagram at the back of the manual).
2. Dipswitch 8 is ON (UP) and the rest are OFF (Down).
2. Go to the Configuration tab on ACTWinSmart software and set the Serial Port to Auto-Detect.

## 10.4 ACTsmart2 readers/keypads not reporting

Check the following:

1. The ACTsmart2 units must be connected in a daisy chained fashion on the RS485 network, Check A, B and 0 is connected to A, B and 0 on each of the ACTsmart2 units and on the SLAVE pins on the controller (respectively).

Check the cable used is Belden 9501 or equivalent and the maximum distance of the network is 1.4km. Check ACTsmart network installation diagram at the back of this manual.

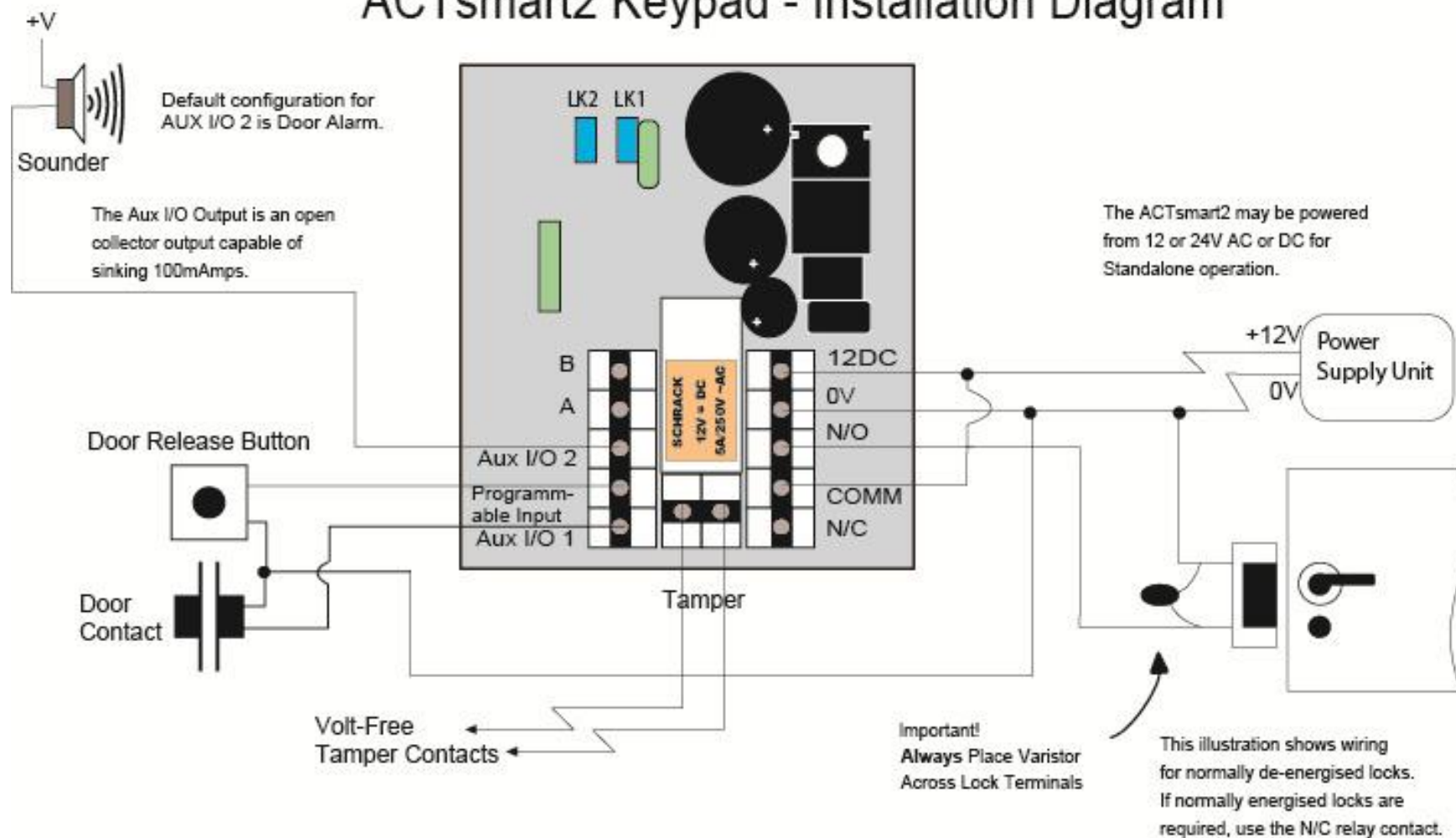
2. The ACTsmart2 readers must be enabled from the Door tab. It should then appear at the bottom of the screen as a black door of off line and coloured door if online.
3. The door information must be downloaded to the ACTsmart controller. Go to the Configuration tab on ACTWinSmart software and click Download All.
4. The address for each ACTSmart2 must be programmed. Make sure the ACTsmart2 is defaulted to its factory settings.

## 10.5 Users cannot gain access

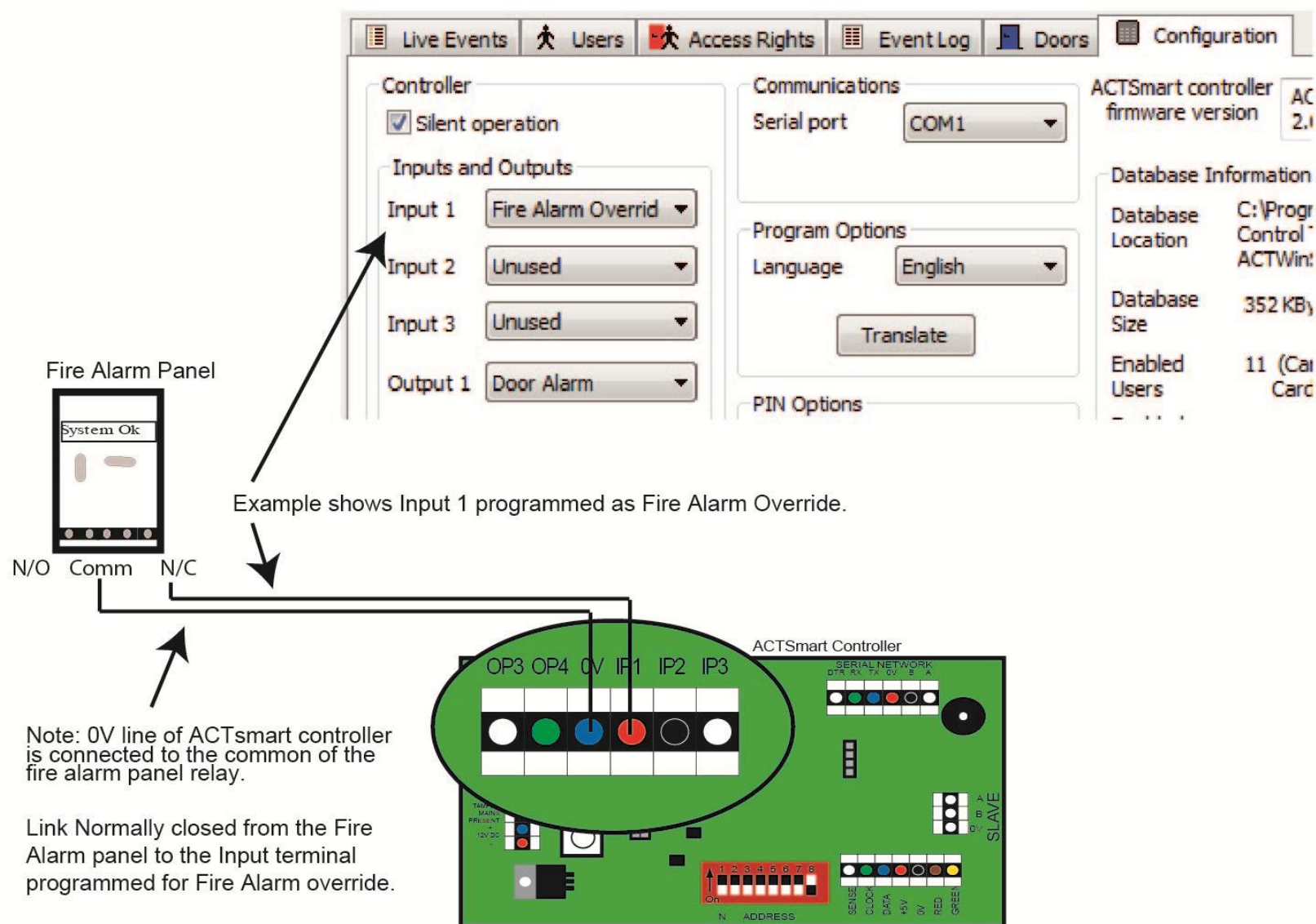
1. Ensure the access rights for the user group assigned to the user are set up correctly. Check the day is not set for a holiday.
2. Check the Actions set for the door. Make sure it is not locked. The door icon at the bottom of the screen should be blue. If it is red then the door is locked.

## 11. Wiring Diagrams

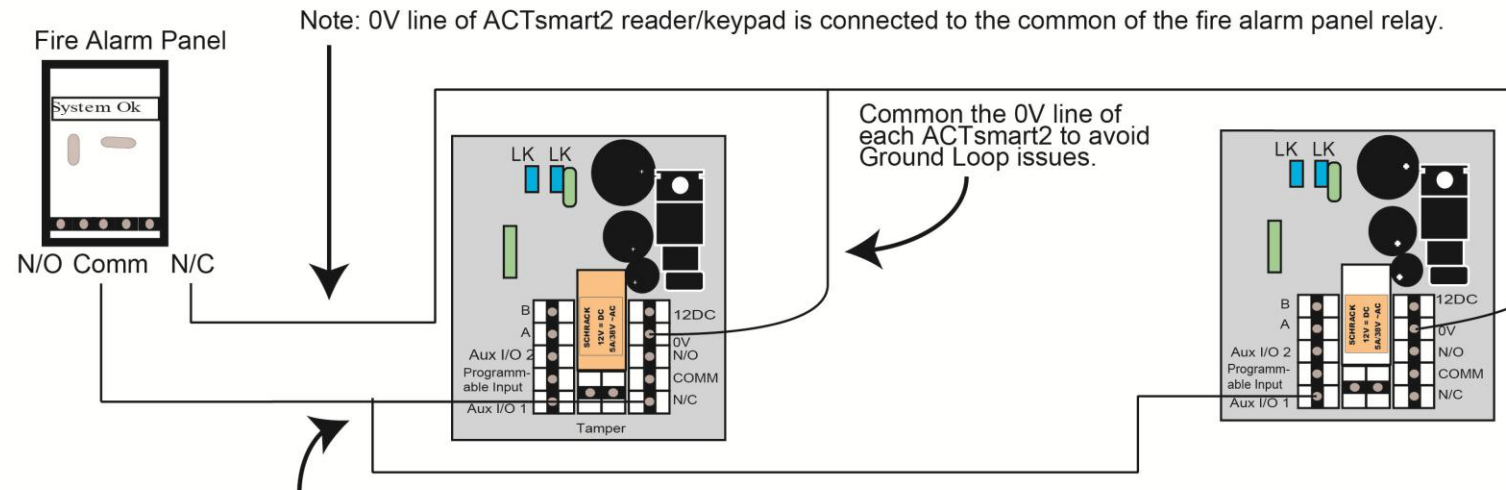
### ACTsmart2 Keypad - Installation Diagram



## Wiring and configuration for Firepanel to ACTsmart 2 controller



# Wiring and configuration for Firepanel to the ACTsmart2 reader/keypad



Link the AUX I/O terminal programmed for fire override on each ACTsmart2 unit .

Live Events Users Access Rights Event Log Doors Configuration

Name: Main Door

☒ Enabled

Hardware information: ACTSmart 1080 PIN&Prox version 4.0

Options:

- ☐ Anti-tailgate
- ☐ Silent operation
- ☒ Chime
- ☒ Duress code
- ☒ Guest button
- ☒ Door forced
- ☒ Door ajar
- ☒ Fire door
- ☒ Security door
- ☐ Toggle
- ☐ Permanent backlight
- ☐ Auto backlight

Timers:

Relay time: 5 Ajar time: 30 Guest buzzer

Actions:

Locked: Not Active

Unlocked: Not Active

AUX IO 1: Not Active

AUX IO 2: Not Active

Card & PIN reqd.

Any card

Card or PIN

PIN only

Inputs and Outputs:

Input: Door Release Button

AUX IO 1: Interlock

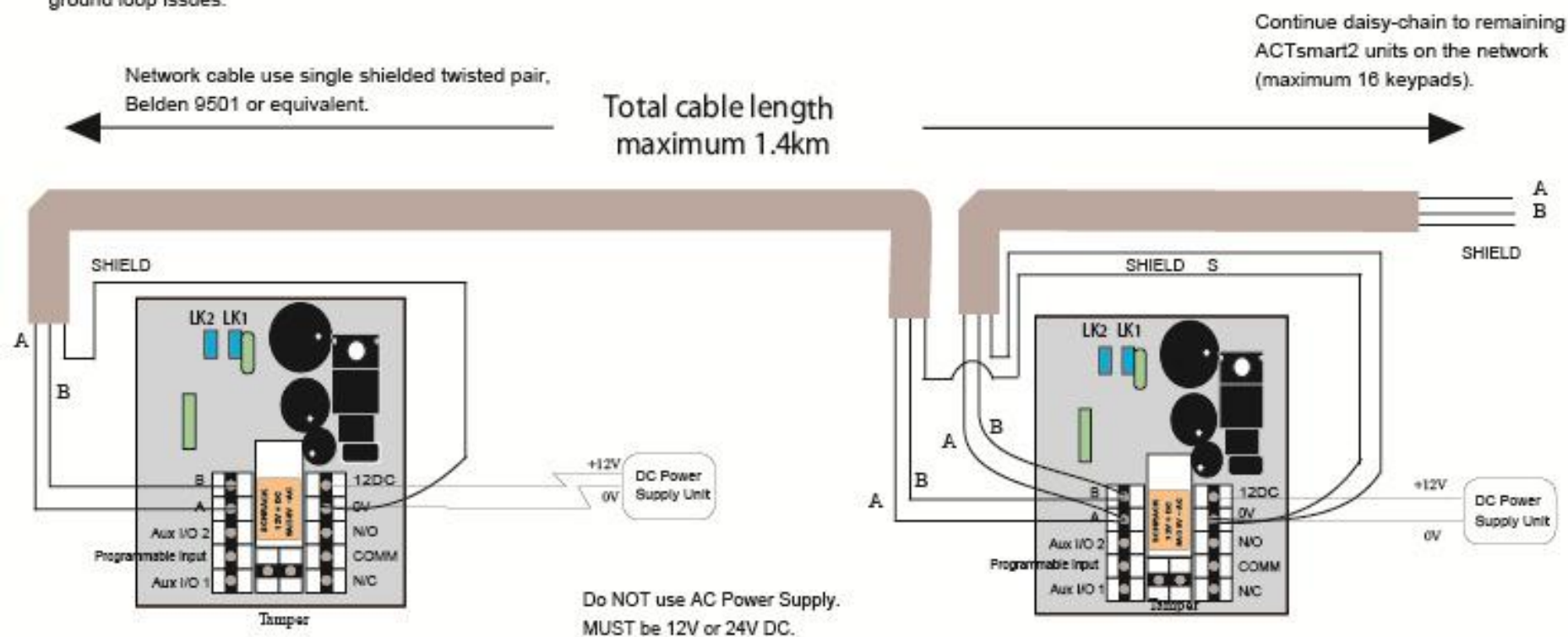
AUX IO 2:



## ACTsmart2 Network Installation Diagram

**Note:**

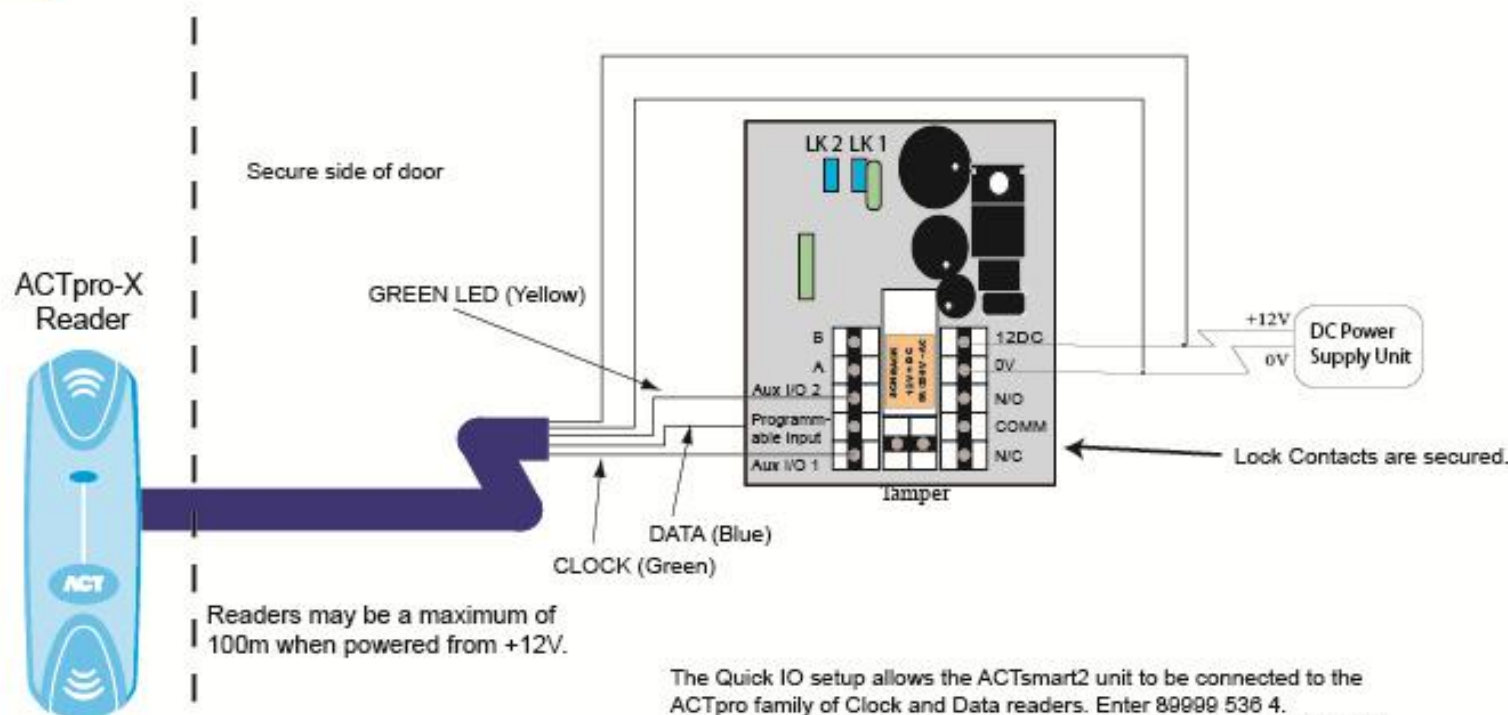
When networking the ACTsmart2 units, common the 0V of each ACTsmart2 to avoid ground loop issues.







# ACTpro-X Connections Diagram



## Wiring for ACTpro-X Readers

White	SENSE	Not Used
Green	CLOCK	Aux I/O 1
Blue	DATA	Programmable Input
Red	+5V/+12V	+12V
Black	0V	0V
Brown	RED	AUX I/O 2*
Yellow	GREEN	AUX I/O 2*
Orange	(Buzzer Control)	Not Used

\*AUX I/O 2 may be programmed to follow either the Green or Red LED.

The Quick IO setup allows the ACTsmart2 unit to be connected to the ACTpro family of Clock and Data readers. Enter 89999 536 4.  
To program the AUX I/O 2 for Green LED operation enter 89999 5218 4.

Any ACTpro-X reader may be installed on the non-secure side of the door and the ACTsmart2 installed inside the secure area. This prevents tampering with the lock relay from the outside.

The diagram shows an ACTpro-X 1030 but any ACTpro-X product can be used, including ACTpro-X PIN readers (ACTpro-X 1050 and ACTpro-X 1060).



## ACT Smart Lock Connection Diagram

The ACT Smart Lock improves the security of ACTsmart2 installations by allowing the installer to locate the lock control relay inside a secure area. The Smart Lock only operates its' relay when a valid card or PIN is presented to the ACTsmart2.

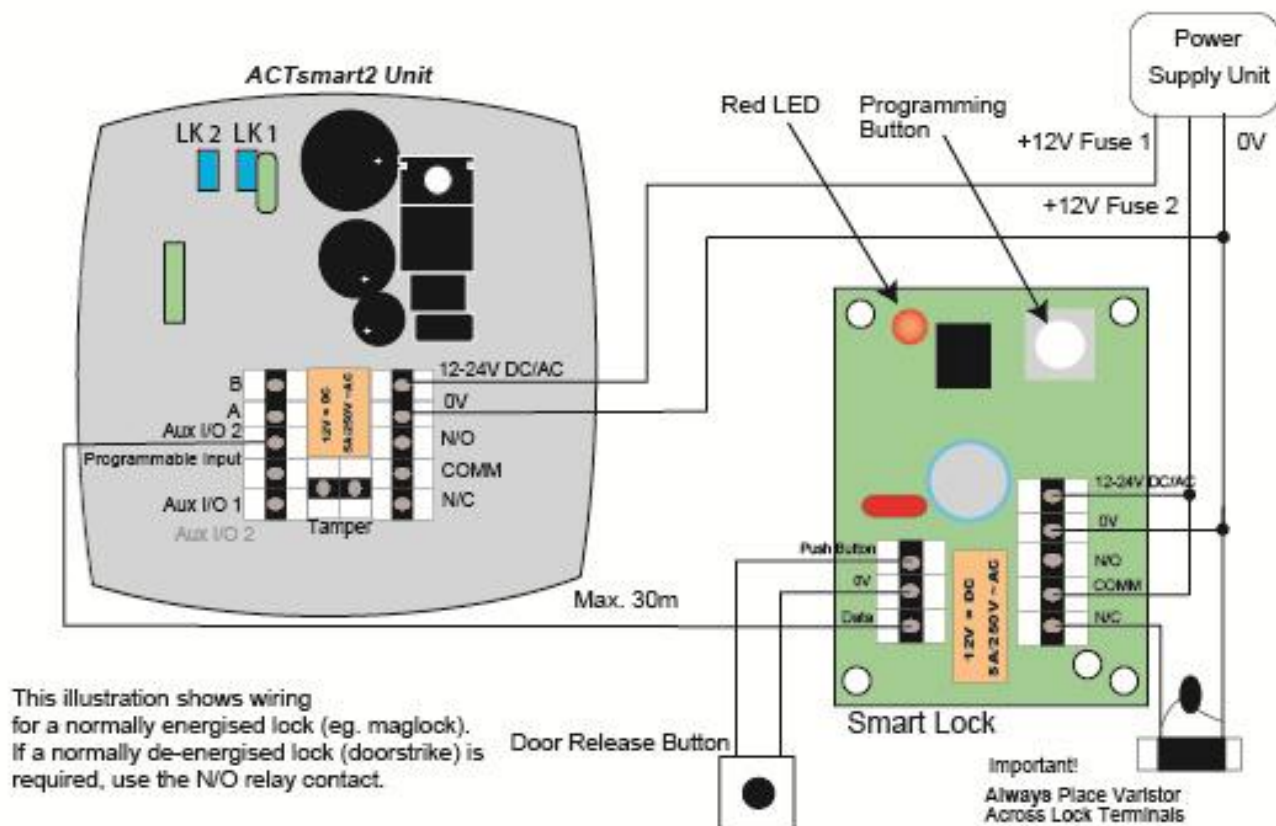
Since the Smart Lock is inside a secure area, an attacker has no access to the lock control relay.

### Installation

The normally open door release button should be connected to the Smart Lock. When the input is activated, the door will open for the Door Relay Time programmed into the ACTsmart2.

ACT recommends installing the Smart Lock inside the Power Supply Unit. Some PSUs can accommodate the Smart Lock directly, otherwise drill holes to suit the Smart Lock, (5mm drill bit required).

For a Maglock, two fused outputs are required - one fused output for the ACTsmart2 and another for the Smart Lock and Maglock. This prevents a short from +12V to 0V on the ACTsmart2 side of the door from deenergising the Maglock. Ensure that the Door Release wires are not accessible to an attacker. The Data line from the Smart Lock to the ACTsmart2 must be less than 30m.



**Note:** A Break-Glass Unit (not shown) is required for Maglock installations.



## 12. Product Specification

Features/Capabilities:	
Simple graphical user interface controls up to 16 doors	
Number of doors	16
Number of Users	1,000
User Groups	16
Time Zones	16
Log Events	100,000
Operating System	Microsoft Windows 7, XP, Vista
Technical Details:	
Voltage Range:	12VDC
Current Consumption (Max):	200mA max
Dimensions (H*W*D):	110 * 190 * 57 mm
Weight:	340g
Operating temperature	-10 to +50 degrees C
Mounting	Surface
Installation	Indoor use only
Ordering Information	
ACTsmart2 CTROLL	ACTsmart 2 controller, manages upto 16 doors, 1,000 users, software and serial cable supplied.
Readers	
ACTsmart2 1070	ACT RFID Surface / Flush proximity reader, IP67
ACTsmart2 1070PM	ACT RFID Surface / Flush, panel mount proximity reader, IP67
ACT PM Flushplate	Flush plate for the ACTSMart2 1070PM, IP67
ACTsmart2 1080	ACT RFID Surface/ Flush, PIN & proximity reader, IP67
ACTsmart2 1090	ACT PIN only reader
ACTsmart2 Lock	ACTsmart 2 lock
Cards and Fobs	
ACTProx ISO-B	ACT Proximity card
ACT Prox Fob-B	ACT Proximity fob
ACTPro HS-B	ACT Proximity Half Shell card
ACTPro DUO-B	ACT Proximity & Magnetic strip card
Software	
ACTWin smart	PC application software, supplied with controller